American Cinematographer

THE MOTION PICTURE CAMERA MAGAZINE

25¢

November
1942

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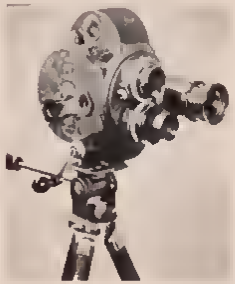

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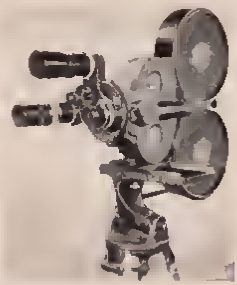

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AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 23 NOVEMBER, 1942 NO. 11

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The Front Cover

This month's cover shows William Mellor, A.S.C. (whose blonde head just shows at the lower right-hand corner of the picture) close-upping a couple of Canadian Commando troops for a scene from the Lester Cowan-Columbia Production, "The Commandos Strike At Dawn." Yes—we'd like to know the gadget being close-upped, is, too, but we'll bet it's bad medicine for Nazis! Photo by Ned Scott

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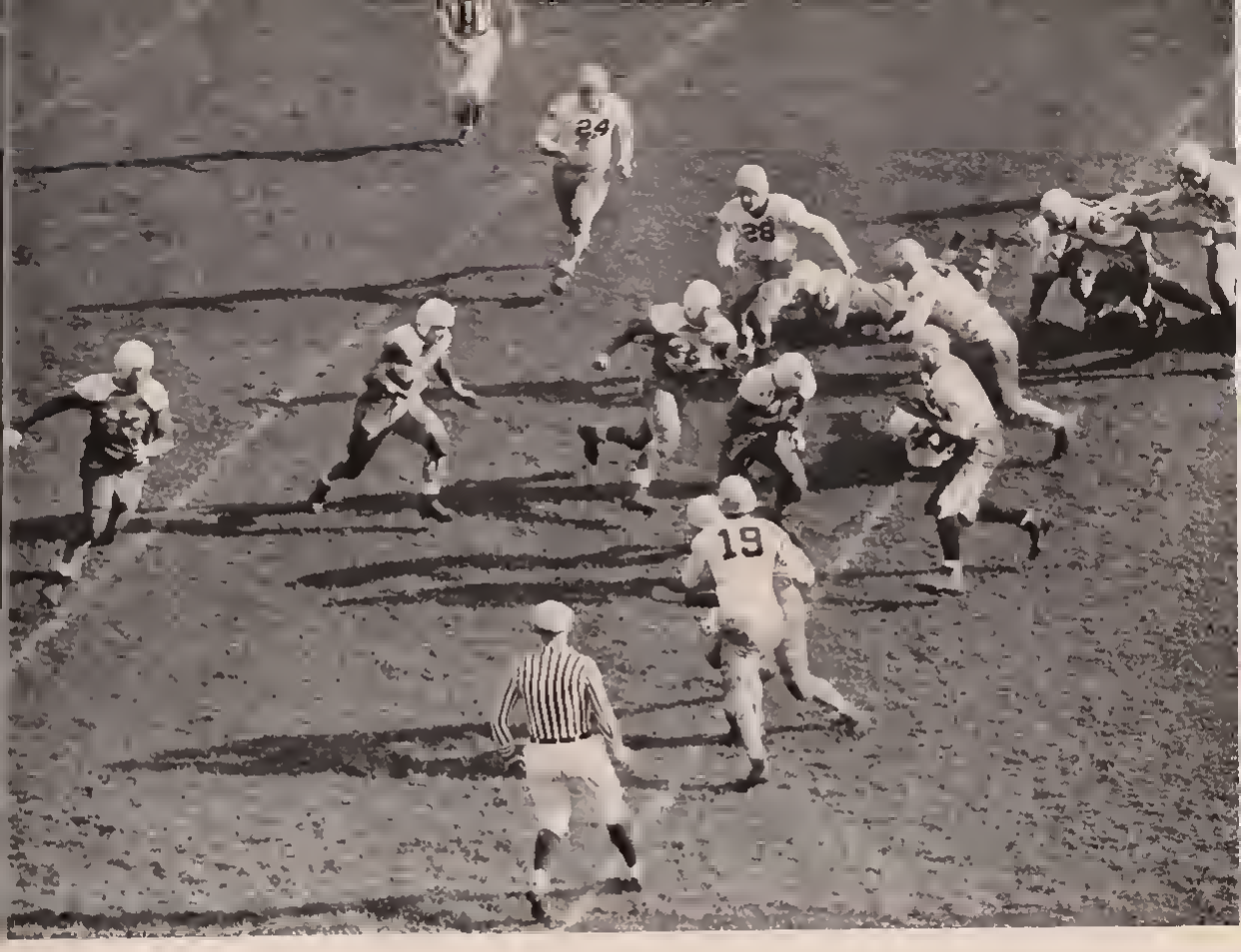

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WHEN SHOOTING UNDER POOR LIGHT

Meanwhile, here is a tip for shooting indoors, or under any poor light conditions, or when you are using slow motion: Get the advantage of the extreme speed in Agfa Ansco Triple S Pan Reversible Film. Because of its great exposure latitude, it's also an ideal film for use under *changing* light conditions.

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A RUSSIAN CINEMATOGRAPHER FILMS THE BATTLE FOR MOSCOW

From the Diary of

FEODOR BUNIMOVICH

FOR many weeks now we have lived in a car, listening to the purring of its engine, occasionally verifying whether the springs and tires are in good shape There were three of us, cameraman Pavel Kasatkin, driver Pavel Shishko and myself We trust our old car despite several holes made by mine fragments, a twisted running board, smashed headlights, throbbing valves There was not a single instance when she went back on us

As if subject to the laws of mimicry, she has already changed her coloring three times. Originally black, she became a spotted green Then, with the arrival of autumn, Shishko smeared her with mud and she became gray and quite invisible on dusty country roads or amid naked trees When snow fell she changed into a white coat Such are the requirements of camouflage

After a two hour ride we reach the first village where we stay for the night In the morning we proceed into the thick of a forest where we find a well equipped hospital Dr Merkulov, head of the surgical division, meets us with an apology, "I am sorry, but I cannot talk to you now I haven't slept since yesterday and there is still a lot of work to do Decide for yourselves what you want to film"

A young, fair-haired girl appears, trying to look older than her age In the convalescents' ward she smiles as she points out two men "Those are two friends," she says, "Victor Gaidamachenko and Lieutenant Valentine Gurevev, tank commander

"They were wounded in the same battle and brought here at the same time But today they will have to part company. Lieutenant Gureyev is being signed out for duty He took part in 21 attacks We wanted to send him home for a rest, but he refuses to go."

Gureyev caught the last phrase, and says "No, Tanyusha, from here I go only to my unit and nowhere else This is not the time for a rest"

Later we film Gureyev's leave-taking All the members of the medical personnel who happened to be free at the moment, and all the wounded able to move without help, came out of the tents to see the popular, merry tank-commander off

While Gureyev is taking leave of his friends an ambulance drives up A woman and three children are carried into the hospital They are Maria Alenkina and her children three-year-old Lena, injured in the head, and badly wounded Shura and Petya The fascist pirates had bombed their village, where none but women, children and the aged remained. The ambulance men carry the children into the ward. There is a stern look on all faces.

"How can you talk of rest?" Gureyev remarks softly, turning to the doctor, "No, we must wreak vengeance," he adds loudly, "and I promise you, comrades, to avenge the children The fascists will yet find out a thing or two about Gurevev"

Tatyana, blushing, hands the lieutenant a package containing a present prepared by nurses. Gureyev embraces and kisses her

When the car disappears Tatyana, recollecting the scene, asks us, "Did you film that, too? Oh, can't you cut that part out?" and her cheeks become tinged deep red

At headquarters we were told that a trench mortar battery commanded by Semenets had fired eighty projectiles during the day, destroying two enemy machine gun nests, two dugouts and a large number of men. Semenets was somewhere in the front detecting the enemy's gun emplacements. The battery was silent. I informed the commander over the telephone that motion picture cameramen were visiting the battery.

"Wait a bit," he replied, "we will establish the enemy position in a moment and then we will be ready to welcome you."

A little while later the order came for the battery to open fire on two enemy fortifications. One shot was fired, which we filmed. Then the range was somewhat changed and a second shot fired The man in charge of the battery told us, "That apparently was adjustment fire. In a moment we will probably open fire from the whole battery. Get ready." . .

We took up advantageous positions for filming and held the cameras in readiness Ten minutes passed . . Fifteen minutes . . No order came to open fire I again rang up the observation point. The reply was: "First two shots fired destroyed both enemy fortifications There is no need for more fire."

An episode for a newsreel was thus quite abbreviated. It was a success scored for the mortarmen, but it left us nothing to boast of . .

The first time we met him was at the front line I saw a Red Army man running from the side of the enemy. Now and then he fell, rose, crawled. He was not wounded—why then was he running from the battlefield?

Only when he got to the trenches and lay next to me I realized that he was a signalman. He looked not more than twenty years of age. His big blue eyes were naive and his smile shy His face and hands were covered with clots of sticky mud As he lay near me he tried to regain his breath as soon as possible, in order to continue on his way. My questions he answered in monosyllables and obviously unwillingly. Several days later in conversation with Battalion

*Extracts from the diary of the young Soviet cameraman Feodor Bunimovich, who was awarded the Stalin Prize for his part in producing the documentary film "Moscow Strikes Back

Commissar Storozh I mentioned the signalman I had seen

"Why, that must be Fedoseyev!" exclaimed Storozh, "he is a wonderful fighter, bold, resourceful, finds his bearings quickly in any situation and under any conditions There were instances when Fedoseyev made his way toward a tank that had gone far ahead, climbed up from the rear toward the turret, knocked as had been previously arranged The tank crew then transmitted through him all the necessary information You and your friends will do the right thing filming him in action"

We managed to film Fedoseyev as he was taking a report from the front line. Shell explosions did not deter him. In the most dangerous spots he dropped down and crawled on His face was all scratches, and on his brow despite a cold, penetrating wind were visible large drops of perspiration We see him running across a field toward a country road, darting into the bushes where his motorcycle is hidden He starts the machine. His report will be delivered on time

Carrying a white flag of truce a lieutenant of Yarokhin's brigade and an accompanying Red Army man crossed the front line The lieutenant had a perfect command of German Explaining to the German patrol that they were bearers of a truce flag, he asked to be taken to Colonel Neudind

"You are surrounded," said the lieutenant, "to avoid unnecessary bloodshed the Red Army command urges you to surrender"

Indeed, Klin was then in an iron ring.

To the Germans, Klin was an important strategic point—it served as a forwarding center for supplying the German army which had been assigned the task of enveloping Moscow After losing 250 tanks, about 1,000 trucks, more than 100 medium and heavy guns and a great number of men, the German army was in retreat. However, the Germans disliked the idea of withdrawing from Klin The negotiations brought no results and Soviet troops launched an assault.

Major General Chernyshev's troops attacked from the north, Colonel Lukhtikovs' troops from the east and Major General Ivanov's mounted group from the south. Four days later Klin fell Colonel Neudind fled westward, leaving over a thousand men killed

We are now proceeding along this road One or two miles from Klin we came across the first traces of the Germans' "planned" retreat In ditches lie twelve cars with the wheels turned upward, two heavy guns, one medium sized tank

A car in front judging by the scattered documents and maps, a staff car—was hit by a shell and blocked the road The trucks following were stalled Our artillery in the meantime had continued to shell the column. The frantic Germans threw into the ditches not only the smashed cars, but some that were in perfect working order All strove to get clear of the fire and abandoned everything One German soldier, stricken by a bullet, remained petrified in a running attitude.

As we proceeded further along the road we came across even larger numbers of dead Germans soldiers and abandoned cars, guns, tanks

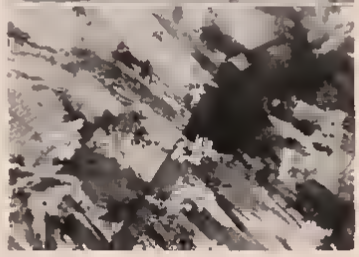
With difficulty we got as far as the village of Petrovskoye before nightfall. A vast field was covered with enemy machines Kasatkin mounted one of them and filmed this amazing panorama from practically every angle — —

When we approached Klin, our troops were entering the town Automatic riflemen wearing white robes, cavalry, artillery, advanced past smashed and deserted German trucks and tanks, past demolished buildings, past numerous crosses with German helmets—frightful traces of the 'victorious" retreat of the Germans

We filmed the entry of the Red Army troops into Klin from the roof of our car. Then we proceeded toward Tchaikovsky's house where lived and worked the great composer We found the gates smashed, the fence broken—apparently the place was used as a tank garage Near the entrance lay a German motorcycle and alongside it, scattered in the snow, were manuscripts and Tchaikovsky's broken bust In the rooms where Tchaikovsky had created works of genius, the Germans repaired motorcycles The wall panels of Karelian birch were torn off, all wooden objects burned, stage models smashed

"The German soldiers took a special fancy for a model of the ballet stage production, Swan Lake," explained the director of the museum, "they extracted all the figurines of danseuses and fought over the division"

Klin is practically burned to the ground Before retreating the Germans blew up the bridge and even the town's new polyclinic Near its iron



Frame enlargements from Moscow Strikes Back On opposite page Russian troops attacking in the snow On this page above, tanks and tank-borne infantry in action note (center) direct hit on tank Beneath, Soviet troops in action Note remarkable shot (second from bottom) as soldier is hit by a bullet Bottom, a bombardment filmed from the air

fence we met a woman in tears—she was the polyclinic's head doctor.

The Klin inhabitants rejoiced and gave a rousing welcome to the Red Army, which brought them liberation Everyone tried to express appreciation by bringing presents When a truck with Red Army men halted near Tchaikovsky's house a woman brought out a big plate of cakes for the men — —

Artillery fire had somewhat subsided, the rumbling receding ever farther into the enemy's positions

From the forest on the right our tanks appear, crushing trees as they rush forward It is a tank regiment going into action—the regiment to which we knew our friend Gurevev has returned

The tanks are followed by infantry

(Continued on Page 500)

Right: Getting equipment to some of the set-ups wasn't easy! Left, above: Mellor (in foreground) lines up a shot of a Commando finishing off a Nazi; bottom, a Commando landing barge used to carry troops and equipment to inaccessable locations

On Location With Canada's Commandos

By WILLIAM MELLOR, A.S.C.

WHEN we went up to British Columbia to film the Lester Cowan-Columbia production "The Commandos Strike At Dawn," we didn't expect to have genuine Commando troops playing themselves in our picture. The story, you see, deals with a British Commando raid on Nazi-occupied Norway, and British Columbia—especially the landward side of Vancouver Island—is an ideal location for duplicating the Norwegian fjords.

But when we got there, we found we had at our disposal not only some unsurpassed (and seldom filmed) scenic backgrounds, but also a cast of the toughest and most daring fellows I ever want to see—picked from several regiments of Canada's crack Commandos. The cooperation the Canadian Army, Navy and Air Force officials extended to us was beyond belief; it seemed as though no matter what we wanted, they would have it for us in an incredibly short time, whether it was a jeep or a 15,000-ton Auxiliary Cruiser.

When they found we needed men to play the parts of our raiding Commandos, and also to enact the Nazis upon whom the raid was conducted, they suggested using picked men from actual Commando units in training in that region. No, it wouldn't interrupt their training—"Not at all . . . in fact, it'll be a jolly good thing for them, right in line with their regular training. They can do all sorts of stunts that'll make your picture just that more authentic. And it'll be like a regular holiday for them, you may be sure." After seeing those boys in action, I don't think either Producer Cowan or Director Farrow needed much urging to accept the offer of their services!

And the stunts those boys went through for our cameras, once we started shooting—! I thought that after working with some of Hollywood's ace stuntmen, I'd seen everything in the stunt line. But I hadn't, until I met these fellows from the Commandos! All I can say is that if when this war is over, any of our present stunt-men feel they've reached an age for retirement, they'll find among the men from the Commandos, and I suppose from our own Army's Rangers, plenty of daring young fellows already trained to hazardous stunt work, who can carry on their tradition very well indeed.

For example, we incorporated in one part of the picture a little bit of business that is part of the regular training of Commando motorcyclists. A Commando on a motorbike comes along a road, finds a Nazi ambush ahead of him, and promptly spills off his speeding motorcycle, drops behind it and starts shooting at the enemy before the motorbike has fully skidded to rest. In practice, they do this at better than 40 miles per hour, on our location, there wasn't enough space for the motorcyclist to work up to that speed, and the ground was rocky, besides. The young soldier who did the scene for us was very apologetic because he had to cut his speed down to 25 or 30 mph! Even so, he did it perfectly for three or four takes—and I don't think there was more than eight inches' difference in the location of his spill each time. I've seen actors who couldn't walk into a simple studio close-up and hit their foot marks half as accurately as that young soldier spilled off his motorbike at 30 mph!

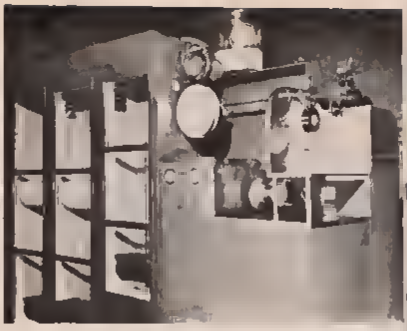
And what those fellows couldn't do with knives and bayonets—! One trick they delighted in doing for us was to make a bayonet thrust that sent the "Nazi's" rifle spinning from his hands, then come up—all in the same motion—and knock him down with a rifle-butt to the jaw and almost in a continuation of the thrust, plunge the bayonet apparently through the foe's throat—actually, of course, just beside it, but with only fractions of a millimeter to spare. Ordinarily, you'd expect to have your actors go through dangerous things like that a bit slow and careful, and speed it up by underspeeding the camera. But these boys did it full speed—and loved it. How they ever missed each other, I don't know. But nobody got even a scratch. I'll tell the world I'd hate to be one of the Nazis those chaps tangle with!

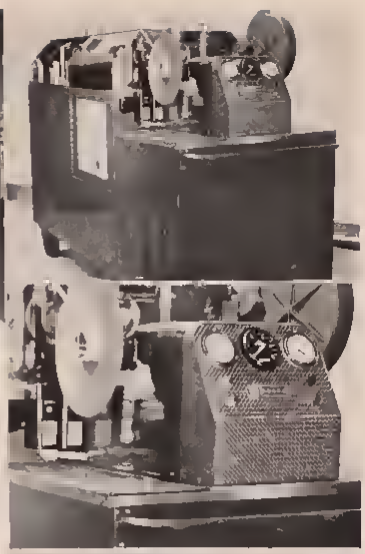
One part of the job, though, the Commandos didn't like. We had brought our own machine-guns, specially adapted to shoot blanks without jamming as regular machine-guns do when there's no bullet to build up the back-pressure that operates the gun. And these fellows didn't at all like the idea of using blanks. It would be much more realistic, they argued, to let them fire live cartridges—and much more fun for them to attack against the fire of real bullets! Somehow, we couldn't quite agree with them.

From the purely photographic standpoint, there wasn't anything particularly unusual about our location. Except, perhaps, our incredible luck with the weather. British Columbia is traditional-

(Continued on Page 489)

THE military cameramen of World War II are going to be "on location" with a vengeance. With action likely to be under way in even the remotest corners of the earth, today's Army and Navy cinematographers will be doing most of their shooting far from established film-laboratory service. And especially in the tropical regions, one of the vital secrets of bringing back good pictures is to get your film developed as soon as possible after exposure. If you're shooting pictures for tactical study, there's very little advantage, too, if the film has to travel half around the globe and back before you can screen it.





A Portable Developing-Machine For Field Service With The Army

By WILLIAM STULL, A.S.C.

But today's military cinematographers have this problem licked cold. They're taking their laboratories with them!

What's more, whether they use 16mm reversal film, or 16mm or 35mm negative-positive, these front-line laboratories are capable of processing film with the same perfection you'd find in a Hollywood major-studio plant. They're small enough so they can be taken anywhere in a light truck, and simple enough so they can be operated by one buck private with no previous phototechnical training!

These revolutionary developing-machines are a product of the engineering skill of H. W. Houston, head of the Hollywood firm which bears his name. Designer of the developing-machines used in several of Hollywood's major studios, he has in these latest designs reduced film-processing equipment to what appears to be the ultimate in portability and simplicity.

Most sensational of these machines is probably the one designed for reversal-processing 16mm. black-and-white film. Though it has an output of 900 feet per hour, the machine is scarcely larger than an ordinary office desk. It measures 70 inches long by 30 inches wide by 54 inches high. Dry weight is 1500 lbs., so that the machine can be transported easily in a light truck, and wheeled into place on its caster wheels.

The design of the machine permits complete daylight operation. The exposed film is loaded into a light-tight magazine. This can be done either in a portable darkroom provided by the manufacturers, or in a changing-bag. The magazine is then attached to the machine, and the film clipped with an ordinary hand stapler to the leader threaded through the machine. From this point until the film has been redeveloped and fixed out, the film passes automatically through light-tight compartments.

As will be seen from the illustrations, the film-loops through the solution tanks are disposed at right angles to the longitudinal axis of the machine. During processing, the film travels first through a "dark" compartment on the right-hand side of the machine, passing through the first developer, stop bath and rinse, and then past the "flashing" light through the bleach, clearing and second-developer tanks. Thence it crosses over to the left hand side of the machine and returns toward the starting-point, passing through the hypo, rinse and dry-box compartments before being fed onto a take-up reel beside the feed magazine. The usual elevators are provided to permit loading a fresh magazine into the machine without interrupting its operation, to alter the timing of any operation, and so on.

The machine incorporates a unique double flashing light principle which is stated to afford remarkable latitude in the case of over- or underexposures. As the film passes from the first developer into the bleaching solution, it passes a fixed exposing-light which prints the image from the first-developed negative on the hitherto unexposed silver halides of the emulsion. This printing action is of course directly proportioned to the density of the first-developed negative image: strong, in the case of a thin, underexposed negative image, and weak, in the case of a dense, overexposed image.

The film then passes through the bleach and clearing baths which destroy the developed silver of this negative image, but do not affect the undeveloped silver halides carrying the just-exposed positive image.

Top, left: the 35mm. developing machine. Right, top: the 16mm. reversal machine. Middle, control panel of reversal machine. Bottom, bleach and second developer section of 16mm. machine, showing double flashing lights.

The film then goes into the second developer, in which this final, positive image is developed. In this section of the machine, the film is constantly exposed to a comparatively weak red light. This tends to intensify the exposure received by the residual silver which is being developed to form the final positive image. This action is automatically proportional to the exposure originally received by the film, as it depends naturally upon the amount of residual silver left after the development and bleaching-out of the first image.

In the case of an overexposure, which of course produced a dense negative image and left comparatively little residual silver for forming the reversed positive, the action of this second exposing-light is to intensify the exposure received by the residual silver, and hence the density of the final positive image.

The practical result of this double flashing, according to photographic tests made by Harry Zech, A.S.C., the firm's photographic consultant, is stated to be

(Continued on Page 489)

Cunningham s Combat Camara and its film magazine Nela studie type pilot-pin registering movement and unique take-up drive

The First Real Combat Camera

By WILLIAM STULL, A.S.C.

THIS war, it becomes increasingly evident, is going to be fought almost as much with cameras as with guns. Already the U S Army, Navy, Air Forces and Marine Corps have put hundreds of cinematographers into the field to bring back a living record of this global war. By the time our forces grow to their full strength, the number of these combat cameramen may well run into the thousands. Their cameras will bring back actual records of front-line operations on land, at sea and in the air; some for purely tactical and technological study, and some as documentary-film reports to the American public.

Up to date, most of this military camera-reporting seems to have been done with the standard type of 35mm and 16mm cameras already available. But a camera that is ideally suited for normal studio cinematography, or for portable use by commercial and newsreel cinematographers under peacetime conditions may not necessarily be so ideally adapted to the use of a soldier-cameraman in a South Pacific foxhole, or a sailor-cinematographer on convoy duty off Arctic Murmansk, or an aviator in a Flying Fortress 30,000 feet in the air. For their use, a combat camera must combine sturdiness with simplicity, and foolproof operation with precision.

Just such a camera — probably the world's first motion picture camera specifically designed for combat use—has been perfected by Harry Cunningham, one of Hollywood's most brilliant camera designers. Sample prototypes are now undergoing tests by the various military photographic services, and when approved, the camera can be put into mass production immediately in any plant the authorities may designate.

In design and operation the new camera is revolutionary. While it may be used on a tripod, it is designed primarily for hand-held operation. But instead of using the conventional box-form shape or single-hand support of most hand-cameras, the Cunningham Combat Camera is designed in gunstock form. It gains additional rigidity by borrowing the two-handed pistol-grip principle familiar in aerial cameras.

By means of these principles, the new camera is probably the steadiest hand-camera ever built. In tests it has proven possible to hold steady on a stationary shot with a 10 inch telephoto lens!

Though the camera in its present form uses 35mm film (a 16mm adaptation will probably be made), it is of the magazine type—but refined to a degree of professional precision heretofore unknown.

The magazine contains the 200-foot film load, together with the entire film movement and take-up. The movement itself is an exceptionally accurate one of the professional pilot-pin registering type. Two sprockets are used, one above and one below the movement.

The take-up employs a uniquely simple form of compensating drive which eliminates belts, friction clutches, and similar complications, and is almost completely foolproof. As will be seen in the illustration, the film feeding out from the feed spindle passes under a spring tensioned idling roller, the edges of which also contact the take-up roll. This is the sole drive to the take-up. Naturally, it compensates automatically for the differing sizes of the feed and take-up rolls— as one foot of film is fed from the feed spindle, it automatically drives the take-up roll to take up precisely one foot of film from the movement.

The angular deflection of this roller and its supporting arm also operates the footage-counter on the outside of the camera.

The film-magazine is of course loaded in a darkroom or changing-bag. This operation has been so simplified that it is easily done under such conditions. As a matter of fact, the Cunningham movement is probably easier to thread—even in the dark room—than the conventional Bell & Howell or Mitchell studio-camera movements.

The magazine is then simply dropped into the camera, through a hinged opening at the top. A slight downward push slides the magazine completely into place, and automatically engages the drive and footage-counter connections.

The camera is electrically powered. A small electric motor in the gunstock mount drives the mechanism, and is powered from two small radio-type "B" batteries which may be contained in a small pack clipped to the user's belt. These batteries will power the camera for several thousand feet of film, and are easily replaced in the field.

Three camera speeds are provided— 16, 24 and 48 frames per second. The speed-control is a small button sliding in an arc-shaped slot at the left side of the camera. For checking speeds, provision is made for attaching a tacho-

Photographer (1 C) B. Maggins using the Combat Camara. Note easa with which it permits following a moving object like an airplane at almost any angle

Above, left: Lt. A. L. Gilks, A.S.C., U.S.N.R., using the camera. Note belt pouch holding batteries to power driving motor. Right: Designer Herry Cunningham with his new Combat Camera. Below: Right and left-hand views of the Combat Camera. Note simplicity and accessibility of all controls.

meter to the main drive-shaft at the right side of the camera.

A four-lens turret is provided, and in the present model, 35mm., 75mm., 6-inch and 10-inch objectives are fitted. These were chosen by members of Commander John Ford's Naval Reserve Photographic Unit as being the most useful range for combat camerawork.

Each lens is provided with its own diaphragm calibrations, operating on a quadrant adjacent to the lens-mount. In use, the operator need merely extend the index finger of his left hand from the hand-grip, to operate the diaphragm control. A finger operated catch nearby releases and rotates the turret.

A single focusing control near the right-hand grip focuses all four lenses. For this, a single lever sliding along a quadrant is used. It may be operated by the thumb, or by the ball of the right hand, as may be individually convenient. Two focusing scales are provided along the quadrant, one for each of the two short-focus lenses. The two long-focus lenses are calibrated for only two points—infinity, for general use, and 35 feet, for slating identification.

The method of focusing is unique. Instead of rotating the lenses in their mounts, or moving the lens-board in and out with relation to the film, the film and magazine are moved in and out in relation to the lenses. This is made possible by means of a splined slip-joint between the main drive-shaft and the nipple connecting the drive with the magazine. In turn, it permits a much more rigid construction in the front-board and turret, as the lenses can be

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Aces of the Camera XXII:

Arthur Edeson, A.S.C.

By WALTER BLANCHARD

ARTHUR EDESON, A.S.C. didn't intend to become a cinematographer when he made his start in the industry some thirty years ago. But since the advice of a far-sighted friend put him on the right side of the camera, he has carved out a career as one of the all-time "aces" of the camera profession. He has probably photographed more real, honest-to-goodness million-dollar pictures than any other man in the world.

Within the last twenty years alone, he can point to a list of some 34 pictures which represent an aggregate production investment of more than $35,000,000. Among them are some of the most memorable films—both silent and sound—of cinema history; others are remembered by showman as being among the industry's top money makers. All of them stand out as memorably well-photographed pictures in their respective periods.

Among the silent films you can mention three of Doug Fairbanks, Sr.'s, finest films, "The Three Musketeers," "Robin Hood," and "The Thief of Bagdad."

Among Edeson's sound film achievements are "In Old Arizona," the first outdoor "talkie," "The Cock-Eyed World," one of the most successful pictures to ever hit the box-office; "All Quiet On The Western Front," "The Big Trail," which Edeson photographed on the now happily forgotten 70mm. 'Grandeur" film, and "Mutiny on the Bounty."

Edeson's versatility is indicated by the fact that he has filmed some of the best-remembered horror films (always a cinematographer's favorite, since they give such opportunities to play around with effect lightings) as "The Invisible Man," and "Frankenstein," as well as a long succession of the fast-paced Jimmie Cagney-Pat O'Brien Army and Navy "action" pictures.

More recently, Edeson's camera has turned out such films as "They Drive By Night," "The Maltese Falcon," the battle scenes for "Sergeant York," "Across the Pacific;" and "Casablanca." He has just been assigned to direct the photography of Warners' big musical, "Thank Your Lucky Stars," which represents an almost incalculable investment in celluloid reputations to be made or marred by the camera.

But back in 1910, when Arthur Edeson first ventured into the moving picture business, he certainly had no visions of a career like this. True, he was a successful portrait photographer in New York, but overwork and the peculiar feast-or-famine conditions of portrait photography — wondering where your next dollar is coming from for ten months of the year, then slaving day and night for two months to try to catch up with the Christmas-portrait rush—had given him an urge to get out of the rut and into some new line of work.

So one fine day he went out to the old Eclair Studio at Fort Lee, N. J., and applied for a job. A least, he started to apply. While he was sitting in the outer office, waiting to see somebody, a man came in and, pointing successively to several of the men who were sitting there waiting, said, "I'll take you—and you—and you. Come with me."

Arthur was one of those selected. And once inside the mysterious recesses of the studio, he found he had been hired —as an *actor!* Luckily, acting wasn't entirely unfamiliar to him, for he had done some amateur and semi-professional work presenting dramatic recitations from time to time. So, as he tells it today, he slipped easily into it, and before long was an established and successful member of the studio's acting company.

But while movie-acting was interesting, he couldn't quite get the love for photography out of his system. After a while, in his spare time, he began to make portraits of his fellow-actors. When the troupe went out on location, he'd snap between-scenes portraits outdoors, sometimes, he'd make more conventional portraits in an unused corner of the studio stage. At nights he would develop the negatives and make the prints in an improvised darkroom at home.

Those portraits must have been good, for they caught the eye of one of the studio's ace cameramen. After looking at several of them, the veteran told Edeson, "You're wasting your time as an actor, son. Why don't you switch over to the other side of the camera, where

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"Post-Recording" Dialog For Educational and Training Films

By JAMES A. LARSEN, JR.

MOST industrial and training films —especially when they are made in 16mm—have to be made on budgets much smaller than those of even the quickest of Hollywood "quickies" and short-subjects. Careful and detailed pre-production planning is therefore the key note of success in this field. Lack of such planning has been the reason why many a hopeful producer has gone to the rocks, and in the process given 16mm. production a blackeye it did not deserve.

The first thing to be determined is of course whether or not the type of production contemplated can be successfully filmed with the equipment, facilities, financing, etc., available. This may seem rather elementary, but yet in the making of industrial and educational films in the past, and training films more recently, it has surprisingly often been overlooked.

For example, the simplest type of production—the type which can be shot silent, with post-recorded narration put in later—can be handled with only a minimum of camera and lighting equipment, and frequently without the need of studio stage facilities. The picture can be photographed with almost any good 16mm. camera, such as the Eastman Cine-Special, the 70 series Filmo, Victor, Bolex, etc., and the recording handled by any commercial recording studio, in either 35mm or 16mm.

On the other hand, the producer planning to film a synchronous dialog film must plan on having available, either through ownership or rental, a fully soundproofed studio with ample lighting equipment (at least 1,000 Amperes or more), a synchronous drive, soundproof blimp, and dolly for his camera, synchronous recording and re-recording equipment, more complicated editing and synchronizing equipment, etc., not to mention facilities for designing and building sets. In other words, virtually the same equipment and facilities, though in 16mm., that would be required for a comparable 35mm. production.

In some instances, where a training or propaganda film made largely in field or factory is to combine offstage narration with sequences of synchronized dialog (as in Paul Rotha's British-made "Night Shift"), it is possible to plan things so that these dialog sequences can be handled by a system of post-recording which has been successfully used by the author and others in making industrial and educational films. This naturally simplifies the problems of equipment, studio facilities, and actual shooting.

Especially under today's conditions, it is often not possible to construct in the studio sets representing factory production lines, and the like, while it is equally impossible to secure really satisfactory recordings on the actual location.

In theatrical 35mm. production, such problems are usually met by using background projection, but in 16mm., for a variety of reasons including unavailability of equipment, this system has seldom been used.

In its place, excellent results have been obtained by the following system of post-recording the dialog scenes.

The scene is filmed on the actual location, and a "reference recording" of the dialog is made, using either single-system or double-system sound, as may be most convenient. Since this recording is for reference purposes only, and will not be used in making the final sound prints of the picture, it does not matter whether the sound-quality is good or bad, so long as it is reasonably intelligible.

This means that the microphone can be placed anywhere out of camera-range, and on a fixed stand, thereby eliminating the necessity of a microphone-boom. The acoustics of the location "set" are also immaterial, so the choice of location can be made entirely on the basis of picture possibilities. Since the sound record will be used only for reference purposes, the camera may be used without a blimp, and the director may, if necessary, talk to the actors during the scene.

When a satisfactory picture take of the sequence has been obtained, the picture and sound-track are processed, and suitable work-prints made. In these days of conservation of film, it is probably most economical to have the work-prints of these sequences completely edited, too.

These work-prints (either single or double-system) are then projected on a synchronous projector in a small recording studio such as would be used for recording offstage narration.

The actors group themselves comfortably about one or more microphones, and watch themselves on the screen while they hear the "reference recording" of their own voices played back through earphones. They then rehearse their lines in sync with the projected picture and playback.

Generally, after only three or four rehearsals, most actors will be able to match the timing of the picture perfectly with their voices, and a final recording of their dialog can be made. If it is necessary to give an illusion of distance to provide proper sound perspective to match the cuts of the picture, some of the actors can be placed at different distances from the mike, or several microphones may be used.

The final dialog recording can be made at a single, continuous take, or broken down into a number of shorter takes, as may be most convenient. Similarly, the narrator whose voice is used for the narrated portions of the picture can rehearse and record his lines at the same time, or at any other time, as may prove most convenient.

Obviously, this method of post-recording scenes of the nature outlined will give the best possible results with both picture and sound, since the picture component is treated solely for picture values, and the final sound record is made in an

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A.S.C. on Parade

Salute to **Wilfrid M Cline, A.S.C.**, new Captain Cline, of the Photographic Division of the U S Army Air Forces

•

And **John Alton, A.S.C.**, is off on active service as **Captain Alton** of the Army's mobile studio, the 1st Signal Photographic Laboratory

•

Here on the Hollywood front, **Paul Vogel, A.S.C.**, dons Uncle Sam's uniform as **Lieutenant Vogel** with Major Frank Capra's very special Signal Corps unit.

•

Congratulations, too, to **Byron Haskin, A.S.C.**, moved "up front" to an executive position out at Warner's Officially he's Head of Special Effects, with several of the industry's best special-effecters heading semi-independent trick-shot units under him, while **Bun** acts as a liaison officer between the writers, producers and technicians, seeing to it that maximum use of special effects is written into every script to aid in cutting wartime production corners Seems to us Warners have a darn good idea—as well as a good man—there Wonder why some of the other flicker-factories don't follow suit?

•

Best wishes to **Joe Valentine, A.S.C.**, and the very new Mrs Joe who before their recent marriage was Miss Patty Schramm

•

Farciot Edouart, A.S.C., re-elected to the Board of Governors of the Academy of Motion Picture Arts and Sciences, representing the Technicians' Branch

•

Harry Perry, A.S.C., Hollywood's top travelling salesm — Ooops, sorry! — *cameraman*, back from a transatlantic round-trip filming convoy backgrounds for Universal's "Corvettes in Action"

•

And **Charlie Boyle, A.S.C.**, heads East to Technicolor backgrounds and locations for MGM's forthcoming "America."

•

Speaking of travelling, **Fred Jackman, Jr., A.S.C.**, made a flying trip to the Air Force's Gunnery School at Harlingen Texas, to scout locations for Pine-Thomas' "Aerial Gunner." Meantime scripter Maxwell Shane worked double time preparing two scripts for the pic —one to be used if they shot on location, the other if they had to work in Hollywood At latest reports, the pic will be made largely on location "deep in the heart of Texas"

•

Harry Hallenberger, A.S.C., draws the plum of Technicoloring the live-action sequences for Disney's "Victory Through Air Power"

•

Arthur Edeson, A.S.C., assigned to Warners' biggie, "Thank Your Lucky Stars," which is expected to feature everyone on the Warner payroll except maybe the gate-man

•

Congratulations to **Ralph Staub, A.S.C.**, who recently celebrated his 10th anniversary as producer-director-cinematographer of Columbia's "Screen Snapshots," and incidentally the 22nd ditto for that perennially popular series

•

Russell Metty, A.S.C., over at RKO, assigned to shoot "Hitler's Children" We didn't know the Nazi All-Highest had any children—but we know plenty of folks who'd like to shoot their Paw! And we don't mean with a camera!

•

Out at MGM, **Ray June, A.S.C.**, draws another "Woody" Van Dyke hurry-up epic—"Gentle Annie."

•

"Little Phil" **Tannura, A.S.C.**, incredibly between pictures on his usually crowded Columbia schedule, dropping in to borrow our pet Craig viewer to catch up on editing some of his personal 16mm. movies

•

Leo Tover, A.S.C., assigned to film Paramount's "China." Come to think of it, we wonder how come Hollywood's genuinely Chinese cameraman, **Jimmie Howe, A.S.C.**, never drew an assignment to a Chinese-localed flicker—?

•

Charley Schoenbaum, A.S.C., teaming with **"Duke" Green, A.S.C.**, to Technicolor MGM's tinter, "Salute to the Marines"

•

A.S.C.-Prexy Fred W. Jackman back from a long week-end spent blitzkrieging the ducks, looking a bit the worse for wear. He won't say whether it was getting up at 4 a.m. to bag those early-rising fowl, or the late nights around the card-table that got him down. But a pleasant time was had by all—except, perhaps, the ducks who forgot to duck when **Fred** started sharpshooting!

•

Incidentally, **Rudy Maté, A.S.C.**, ought to have the prize for this month's most diplomatic gesture We gather there was quite some argument going on between D O Selznick and Samuel Goldwyn as to the terms upon which the latter could buy **Rudy's** contract But **Mate** very neatly settled the argument by enlisting in Major Capra's Army Film Unit!

•

George Barnes, A.S.C., again loaned to RKO by his nominal boss, **D. O S.**, for "From Here to Victory" If those rumors about Selznick's staying out of production "for duration" are true, maybe **George** will be on loan-out "from here to Victory!"

Billy Mellor, A.S.C., hates to get his hair cut But up in Canada on location for "The Commandos Strike At Dawn," they found a way to persuade him The helmeted gent with the persuasive bayonet isn't a real Nazi, but a much tougher individual—a Canadian Commando playing a Nazi in the picture H'm after looking in the mirror, guess Ye Ed will scurry to the barber's himself, before anyone tries the same stunt on him!

•

Tom Tutwiler, A.S.C., grinning like a Texas version of the Cheshire Cat, reports that Warner Bros —and especially **Bun Haskin's** trick dept —is one swell place to work. Here's hoping this new job lasts as long as your previous one, **Tom** You were at MGM 15 years, weren't you?

•

A cheerful letter from Signal Corps **Lieutenant Charles W. Herbert, A.S.C.**, bubbling over the enthusiasm for the worthwhile nature of the job his outfit's doing From other sources, we gather the Signal Corps could make use of several more men like **Herb**—but then, who couldn't?

•

Wonder what's become of our Ol' Swede, **Lieutenant Ray Feinstrom, A.S.C.**? Haven't heard from him in a dog's age Well, with his luck at hitting photogenic weather wherever he goes, maybe **Ray's** on the restricted list as a military secret!

•

Everyone congratulating **Charles G. Clarke, A.S.C.**, on the smashing success of the October A S C Open Meeting which he Chairmanned

•

Wonder what's become of new-bridegroom **Eddie Cronjager, A.S.C.**, who promised to have a pow-wow with us some time ago? Of course, after having met the new Mrs Eddie, we can understand why he's been muchly occupied of late, even if he is between pictures out at 20th Century Fox

•

Jackson Rose, A.S.C., beaming over the fact that the current fourth edition of his "American Cinematographer's Handbook" is about to go into a second printing, by extremely popular demand

•

Walter Lundin, A.S.C., gets the D of P assignment filming "Half-pint Kid" out at MGM. Nice going, **Walter!**

THROUGH the EDITOR'S FINDER

FOR more than a year, almost every issue of THE AMERICAN CINEMATOGRAPHER has carried on the "A.S.C. On Parade" page at least one item telling that one or more members of the A.S.C. had joined the Nation's Armed Forces. In the course of the last few weeks alone, eight or ten more of the industry's top-ranking directors of photography have either left Hollywood for uniformed service, or announced that they were slated to do so as soon as they completed their current assignments. All told, by the time this appears in print there will probably be more than thirty members of the A.S.C. making pictures for the Government, rather than for the studios. It seems certain that more will follow them.

This brings the industry face to face with a very serious problem. For years we have been accustomed to saying that the industry had more cinematographers than jobs available. But it is also true that the bulk of the industry's major-studio production has been photographed by a comparatively small group of about fifty top-flight directors of photography. There were and are other capable directors of photography who for various reasons have not been counted among the industry's top-flight "regulars." Many of them have acquitted themselves with distinction on assignments to shorts, second units and program features, but because the producers' cry was always for familiar talent with extremely current credits, the charmed circle of the industry's "regulars" has remained much the same year in and year out. When vacancies occurred due to death or retirement, they have very largely been filled by promotions from among the operative crews.

Today, a constantly increasing number of men from both groups are being taken out of the industry to serve the Army, Navy, Air Force and Marine Corps. An even greater stream of invaluable manpower is being drained away from among the operative groups, for these men are younger, fitter, and even more anxious to put their skill at the service of the Nation. It is safe to say that before the year is out, the cream of the industry's talent, both among the "ace" directors of photography, and among the rising young operative cameramen normally best fitted for promotion, will have been skimmed off by the Armed Forces. We will be hard pressed to find enough efficient operative crews, and even harder pressed to find directors of photography capable of shouldering the responsibilities of photographing the industry's major product. *What can be done about this vital problem?*

We'd like to offer a suggestion. As we have already pointed out, there are quite a number of capable directors of photography who have done well by occasional minor assignments, but who have not for years had an opportunity to show what they could do with a really important picture. There are others who for various reasons, including age, ill health, or perhaps studio politics, have been in retirement, or at least considered out of the studio picture, even though they may have had distinguished careers in the past.

As we see it, sooner or later many of these men will have to be pressed into service anyhow, to keep the production wheels turning. Why not, then, call them into service *now*—before they are so pressingly needed—while there is yet time to break them in gently, teaching them the 1942 studio ropes while there are still plenty of today's top-flight camera aces to do the coaching? If each major studio would put two or three of these men under contract now, they would have time to stand by and observe the methods of the men whose places they may soon be expected to fill, and to try their hand anew at lesser assignments until they become thoroughly conversant with today's equipment, materials and methods. In that way, when the need came for their services on major assignments, they would be ready, and the studio could place them on such jobs with confidence that their pictures would be competently handled from the start. Isn't it worth a try?

•

EVERY now and then one of our readers among the studio professionals asks us why we have of late devoted so much space in this magazine to discussions of the professional uses of 16mm. The answer is simple: we believe that 16mm. is very much the coming thing in professional cinematography—even in many phases of studio production. And we want our readers to be ready for it when it comes.

The man who today argues that 16mm. is not worth professional consideration because it is used by many thousands of amateurs is deluding himself. Certainly 16mm. is used by amateurs. But it is also used—and used very professionally—by the thoroughly professional makers of industrial and educational films. It is edging its way into the studio field far more rapidly than many of us would realize. Already it is used for tests and location scouting. It has been used successfully for the production of short-subjects released in 35mm., and even for special sequences of feature productions. It is being seriously experimented with for use even in the most exacting studio work of all—the making of process background plates.

Many of our military photographic services are already operating largely, and in some cases exclusively on a 16mm. basis, others are swinging to it with increasing rapidity. The work that these groups are doing—the experience they are gaining—the new equipment and methods they are developing for using 16mm. professionally are literally revolutionizing 16mm. They are forcing its progress at an absolutely incredible rate.

We can't tell what the motion picture industry will be like when this war is over, but the signs are already very plain that it will be something very different from the motion picture industry we have known until now. It is equally plain that 16mm. will be a very vital part of tomorrow's production set-up. Sixteen millimeter in its present state of development could step into the studios right now and replace 35mm. for most purposes. By the time the war is won, and the amazing technical developments in 16mm. equipment and methods which the war is fostering and financing become available for civilian use, 16mm. will almost certainly be absolutely on a par with 35mm., if not indeed actually ahead of it.

Therefore we are trying to give today's technicians, executives and creators an opportunity to familiarize themselves with professional 16mm. now, so they will be fully prepared when the time comes—as it may come far sooner than any of us expect—when 16mm. is tossed into the industry's collective lap with the remark, "Here it is, now make pictures with it!"

•

WE could not feel that this issue of THE AMERICAN CINEMATOGRAPHER was complete without in some way expressing our appreciation of former editor George Blaisdell who last month came out of comfortable retirement to put his shoulder to the wheel when protracted overwork had taken its toll of your editor's health, and played havoc with this magazine's normal publication schedule. With a constantly increasing number of our most dependable contributors joining the Armed Forces or getting into strenuous defense work, an increasingly heavy load was thrown on the editorial shoulders in keeping this magazine up to the standards we have set for it. Eventually things reached the point where something had to give way—and the editorial health and nerves proved to be the weak spot.

So on last month's issue, friend Blaisdell stepped into the breach and performed miracles in whipping the magazine into shape in an incredibly short time, and under great difficulties. No one could have worked harder or more efficiently than he did, and no one could have been a finer or more considerate fellow-worker. There are times when words seem a most inadequate means of expressing deeply-felt appreciation, and this is one of them—but we want most sincerely to say a heartfelt "Thank you" to George Blaisdell for his help.

Three railroadin' musketeers left to right, Cinematographer Stensvold, Director Boland, and Cinematographer McCosky, set up with Cine Special and Bell & Howell 16-Pro atop a box car

"RAILROADIN'!"— IN 16mm. KODACHROME

By ALAN STENSVOLD, S.S.C.

President, Society of 16mm Cinematographers

LEAVING Los Angeles a short while ago, station-wagons, airliners, taxicabs, and motored go-carts were the modes of transportation which launched our production troupe on a nation-wide jaunt to film (in color) the story of American Railroads.

Starting at the beginning, however, I must say that John J. (Jack to his friends) Boland, old-timer in the industry . . young in action, was assigned by the General Electric Company to produce and direct a picture covering all phases of Railroading, its history, development and modern operation. It must be filmed in color, shot under *actual* and *authentic* conditions—hot or cold, wet or dry, rain or shine—and be completed in sixty days!

Jack received the final okayed shooting script on a Thursday, I was called in on Friday and rounded up our travelling crew and equipment. Our cameras included the Bell and Howell 16mm. Pro camera and an Eastman Cine-Special.

We departed Saturday via a specially equipped station-wagon to make certain running shots and atmosphere scenes en route to Tucson, Arizona. Our travelling crew included Jack McCosky, S.S.C., associate and operating cameraman, Hugh Wade, assistant (now in England with the Signal Corps), assistant director Ray Nazarro, Boland and myself.

Near Tucson we filmed a cattle round-up and modern methods of loading cattle into stock cars. While waiting for the herds to arrive at the loading corrals, Boland expressed a desire for some nice fleecy white clouds to break up the otherwise clear blue sky. About thirty minutes later the herds began arriving . . . and believe it or not . . . so did the fleecy white clouds. Instead of getting some merely perfect shots we "decorated" those stockyard scenes with the most photogenic sky we had on the entire jaunt.

After a day of shooting action—angle-shots under corral fences, compositions through boxcar-wheels and brake-riggings, and even one set-up framed through the milk faucets of a cow—we wrapped up, rushed to the hotel to clean up in time to catch the 4 p.m. plane for Chicago. It seemed Clarence Bailey, the General Electric man assigned to our picture, had arranged some "can't wait" shots there for the next day. So off we went "railroadin'" via American Airlines sleeper.

The Chicago scenes were important. We were to cover operations at the clearing "hump" yard just outside Chicago. In railroad language, a "hump" yard is where long lines of freight cars are reshuffled into proper trains for transit to assigned destinations . . . SEE?

On that particular day only, some extra-new types of Diesel-electric switch-engines would be available for filming the "humping" operations. More than 125,000 cars are handled daily at this yard.

An overcast sky greeted us that morning. (Incidentally we rode taxis straight from the airport to the railroad yards.) However, since we were using 16mm. kodachrome, with No. 35mm. temperaments to hinder us, we set up and began shooting anyway. Those engines couldn't wait for weather!

About 11 a.m. the sun broke through for a short period and we kept shooting while the engines kept "humping." Even the 27 correction filters I usually carry couldn't correct for the "blue" of that Chicago atmosphere. Motored go-carts carried us around the yard. Late that day we checked in at the Palmer House. (That's no plug for the place . . just indicating we travelled first class on this jaunt!)

The next day was sunny but smoky and hazy, so we were compelled to make our shots without sky or great distances to avoid as much of the smoke and haze as possible.

Finishing our scheduled shots sooner than we expected Boland and I went out to find a suitable location from which to shoot a good skyline scene for the opening of the picture. We couldn't find an angle of the Chicago skyline that didn't have electric signs or painted signs advertising soft drinks, hard drinks, soaps of headache remedies displayed so prominently that the shot would have appeared to stress signs rather than skyline. To digress a moment, we tried finding a suitable skyline in every large American city but it wasn't until we reached San Francisco that we found a "clean" skyline, free of signs.

At Sandusky, Ohio, we filmed the operations of giant coal derricks that dump an entire carload of coal into the waiting ships at the rate of one car every 54 seconds. A very interesting operation on the screen, but terrifically dirty to film. It took just as long to clean the coal-dust out of us as it did McCoskey and Wade to clean the cameras after that day of shooting. It was not only coal-dusty, but about 100 degrees in the shade (if any), plus the usual Eastern industrial haze all around the area as well. When the report on the film we had shot, including the Sandusky scenes, reached us a few days later, it read "exposures okay, but very little color in scenes after Tucson, no blue skies, etc." So Boland

wired back "What the H . . . are we supposed to do . . . stop the smoke of industry so we can have blue skies? . . . did you ever see red coal?"

Oh, yes . . . we rode a train from Chicago to Sandusky and from Sandusky to Cleveland. At Cleveland we filmed another gigantic operation . . . unloading ore from the lake boats to waiting gondola cars

To capture dramatically the complete operation of the unloading cranes, we rigged a mounting to carry one camera, Boland and me on one of the crane arms just slightly above the ore jaws The camera, a Cine-Special, Boland and I rode our precarious perch into the hold of the ship to film the five-ton "bites" of the jaws, then up, out and over to see the ore dropped into waiting cars This was another dirty and greasy ride plus hot and hazy atmosphere

The next day at Buffalo, N Y, we encountered heavy rains but we made some very unusual action scenes of freight and passenger yard operations despite the wet conditions.

At Harrisburg, Pa., through the cooperation of W. A. Wentz, publicity director of the Pennsylvania Railroad, we filmed modern train maintenance operations which were very exacting as well as interesting and occasionally hazardous At huge yards like these, minute inspections are given all railroad equipment One phase is handled by men stationed in pits (air conditioned for their comfort) to inspect the under-side of rolling-stock (another railroadin' term for freight cars, passenger cars, locomotives, etc.)

Filming this operation presented a "cute" lighting problem. We were compelled to light the under-side of the rolling-stock from between the rails to an exposure that would match the exposure of the sky that would be visible in the scene Thanks to the aid of the railroad's electrical department this was accomplished in short order and we turned in a correctly exposed under-train color scene

In the world's largest steel plant at Steelton, just east of Harrisburg, we filmed the making of steel rails and car wheels We followed this process from the ore-piles outside the plant, into the huge furnaces, following the molten steel down sand troughs into vats, then poured into forms from which it was fed through rollers and shapers until it finally came out the other end of the plant as finished rails and wheels

Throughout Pennsylvania and the eastern states we filmed more atmosphere shots, fishing, camping, boating on the lakes, in other words, we had a grand time for a few days

Washington, D C, gave us some of our most valuable shots, what with so many famous trains coming and going from that great capital city. Boland lined up one of the most spectacular railroading shots in history there. He staggered the noses of all the famous locomotives drawing trains into that city across as many tracks The still-man from one of the railroads became so excited about the hot that in trying to shoot a flock of publicity stills he double-exposed every shot he made . . . we learned a few days later. A cool, calm and collected crew like us from Hollywood weren't bothered at all. Of course, our "one-way" camera motors might be entitled to some of the credit for our success!

New York City and vicinity offered us some more unpleasant weather Early one morning we had to go up the Hudson several miles to find a good spot for an action-shot of the famous Twentieth Century Limited We weren't far from Ossining (Sing Sing to you) when we found the ideal location.

The cameras were set up, downwind from a picturesque curve, four tracks wide. Our guide from the railroad company wasn't sure on which track the Century would travel that morning. The sky was flecked with slow moving clouds The train was due about 7 00 a m . the blue morning atmosphere was just right for color to be its worst. The cameras were set up at the most logical spot, filters, lenses, exposures set, and the "Century" whistled for the curve

Boland shouted "Roll 'em!" As the "Century" came around the curve at its reputed 100 per, a cloud started across the sun. When the "Century" passed out of our picture the cloud passed off the sun Since we didn't have an Act of Congress in our pocket, we couldn't call the train back So that shot had to be *it!* We were scheduled elsewhere the next morning, so there could be no retakes To ease our tempers, someone piped up, "Well, we shot it under *actual conditions*, didn't we?" I'm still surprised some of us didn't remain there at Sing Sing—for more or less justifiable homicide

Boland took us to see the Dodgers beat the Giants that night After the game he and I caught a plane for Cincinnati to be on hand for another early morning shot The rest of the crew took it easy on a Pullman.

Seven-thirty the next morning Jack and I rolled off a swell shot of the "Ponce de Leon," the South's crack streamliner It had beautiful composition, farm buildings, trees, etc, a thing for which Boland is a stickler A nice fellow named Callahan, publicity director for the railroad, had driven us out to the location, about thirty miles south of Cincinnati Cruising back to the city Boland mentioned it was a shame we weren't closer to town else we might have made a shot of the "James Whitcomb Riley," another famous eastern streamliner, that morning instead of waiting to get it the next day. It was due to leave the Cincinnati station at 8 00 a m, bound for Chicago. Callahan said, "If you're game — we can make it!" Boland agreed

To make a long story short, we crossed the overhead bridge near the station just as the "J W Riley" was pulling out Our driver said he could beat it to a spot west of town where we could get a nice running shot of it. En route, Boland spied a church-steeple which would make good background composition for the

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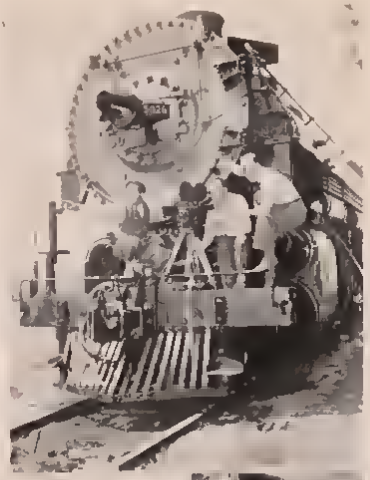


Top the pilot beam of a big Union Pacific locomotive makes a sturdy—if cramped—platform for filming running shots. Middle a hand held camera is useful for tricky angle shots—if there's someone to hold the cameraman! Bottom "riding the blinds" on a streamlined baggage car to get a Railroadin' " running shot

"STROBO-SYNCING" YOUR MOVIES WITH 78-RPM PHONOGRAPH DISCS

By D. LISLE CONWAY

President, Syracuse Movie Makers' Association

TWO months ago I described for readers of THE AMERICAN CINEMATOGRAPHER the system I use for stroboscopically synchronizing home movies with sound-on-disc, using home-recorded 33⅓rpm acetate discs to carry music, narration and even synchronized dialog. Quite a few of my friends in the Syracuse Movie Makers' Association, not to mention total strangers elsewhere who read the article, were kind enough to tell me they thought it was a good idea, and that they were going to build themselves strobo-sync outfits similar to mine.

Then—at least as far as my friends in Syracuse were concerned—came an embarrassing (for me!) discovery. My own outfit, you see, was built up several years ago, before wartime shortages and priorities entered the picture. But when my friends started to build their outfits, they quickly discovered that, at least in our part of the country, there just aren't any more half-speed turntables to be had! There are plenty that work at the standard commercial phonograph speed of 78 rpm, but (unless you are lucky enough to buy one second hand) none that operate at 33⅓ rpm.

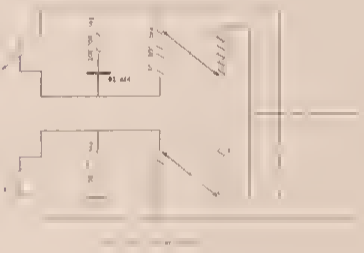
I imagine the situation is much the same in many other regions. So here is the method we worked out to permit synchronizing 78-rpm records with home movies by the same stroboscopic synchronizing principle. It was tested at a recent meeting of the Syracuse Movie Makers' Association, and worked very successfully.

If possible, obtain two standard phonograph motors and turntables. These motors may or may not be of the 60-cycle synchronous type, but if they are the difficulty of matching their speeds will be eliminated. However, if only one turntable is to be used, planned silent periods during the showing of the film will be necessary as recordings are changed. Therefore, the use of dual playback turntables is highly recommended as a smooth transition from one table to the next can be made with no break in the continuity of either the sound or the picture.

The motor should have sufficient power or torque so that the recording can be held motionless as the turntable revolves underneath it. This will enable a fast, clean, start, with the record coming up to speed within a half revolution of the table, so that change-overs from one table to the next can be made without losing a beat of music. This is done every day in radio stations throughout the country when recorded symphonies are played in part or entirety without interruption on the air.

Mount the turntables on a board or cabinet of sufficient length so that two twelve-inch recordings can be played at the same time without interference. The pickups should be mounted in the same way. Here it might be stated that most of the pickups marketed today for playing commercial records have a stylus or needle pressure which is far too heavy for playing acetate recordings. Therefore each pickup should be counter-balanced or adjusted so that the stylus pressure or weight of the head *at turntable level* should not exceed two or two and a half ounces.

The ideal weight is one ounce or slightly over, but this weight will depend upon the mechanical impedence of the stylus, in other words, adjust the counterbalancing weight or spring adjustment of the pickup until it reaches the point where the stylus will just track the record groove with a full frequency response and no distortion can be noticed. This point will vary with different makes and types of pickups.



A mechanical "one input" mixing circuit is illustrated by which it is possible to carry music on one turntable and sound-effects on the other, fading either one up or down without affecting the level or volume of the other. This is extremely useful in adding sound to silent films and also can be used in re-recording sound from commercial records to the recording being made to sync with the film.

The rest of the reproduction equipment may be the same as outlined in the previous article.

In recording by this method, if a pair of dual recorders can be used, the recording of a full-length production can be run off all in one take; the recordist changing over from one recorder to the other at a given signal or at the end of each disc by merely flipping a switch. The point on the film where each change-over of recorders is made should be carefully noted for later reference.

Also, a careful check should be made to ascertain that both recorders are up to and running at the same speed of 78.26 rpm, otherwise a change of pitch in sound and projection-speed will be noted.

If the playback tables do not have synchronous motors, then a check on these should be made in like fashion. This can be done with either two of the regular commercial 78.26 rpm strobes supplied with the motors, or by counting the number of revolutions per minute

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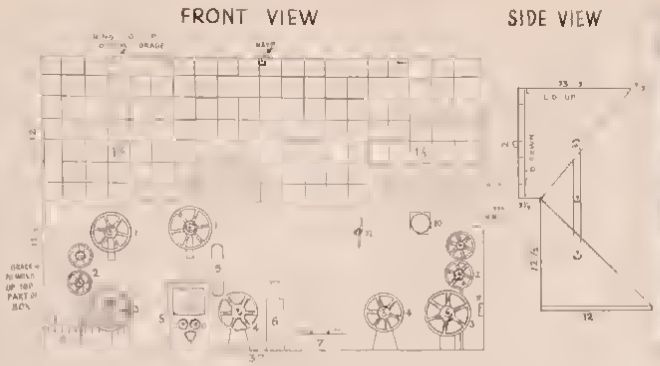

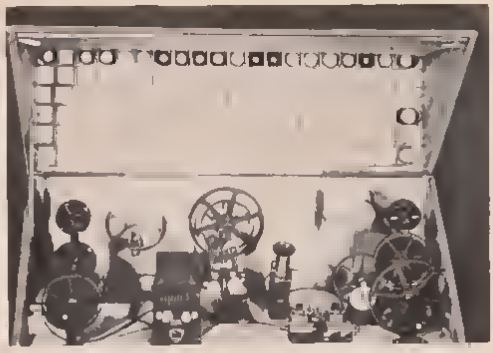

Editing Is Easier With This Home-Made Film Editing Case

By EARL ANTRIM

I'VE always enjoyed editing movie film. To me, it's a joy to see the short scenes grow together to make a smooth-flowing movie story. But the haphazard way most of us go about the job of editing always left me feeling so worn out and dissatisfied that it took most of the joy out of it.

Editing film properly is really a systematic process. But there's nothing systematic about the way most of us leave snippets of film scattered all over a table-top where they're likely to become lost and dirty, especially if we're interrupted—as we always are—right in the middle of the job.

The trouble is that you can't go into your pet camera store and buy a gadget that will enable you to keep your film-editing orderly. You can buy rewinds, splicers and viewers, of course, and even boards with little numbered cups or pegs to hold the scenes while you assemble them. But there's nothing that will hold your whole editing outfit—film and all—as a unit, and let you shut the whole thing up, dust-free, the way you can put your camera or projector safely away in its case when you aren't using it.

Personally, I'm a nut for movie gadgets, and I've looked long and hard for an editing gadget like this. I've haunted the camera-stores, and read all the ads and "build-it yourself" articles in all the movie magazines I could get hold of, but never found anything to quite suit me. Talking the matter over with my movie-making friends, and studying their equipment brought almost the same result, some of them had built gadgets that had some of the features I wanted, but none of them seemed to have all of the features I wanted.

So I decided I'd have to build my own. I'm neither a mechanic or a carpenter—in fact, I really don't like to do this kind of work. But once I had the basic idea sketched out, I found the job of making the editing case surprisingly easy. The thing is so simple that I'm sure anyone who can make a saw and a hammer come reasonably near doing what he wants them to do can make one without trouble.

Making mine required only a few hours' work and $2.75 worth of material. Of course, this is just the material for the case—what goes into the box for extra convenience — rewinds, viewer, splicer, extra "dummy" rewinds, etc.—depends altogether upon how much of this equipment you've already got, and how much you want to spend buying new accessories. A very nicely equipped editing case can be had for ten or twelve dollars. Mine, which I filled with all the film-handling gadgets I thought I could possibly need, was completely equipped for less than $60.

Here's the bill of materials required:

1 pair of small strap hinges
1 pair of small offset hinges
1 small hasp and lock
1 handle
1 dime-store electric light socket
1 electric outlet box for 2 or 3 plugs.
A few feet of insulated 2-wire cable.
A small quantity of ¾" stove-bolts, ½" and 1" long.
A small quantity of nails, wood-screws and brads.
2 wooden dowel-pegs to hold lid of film-storage compartment open and shut.
1 wooden panel, 1x12x105" from which to cut top, bottom and sides.
Plywood, 14¼x37½" for front.
Plywood, 12½x37½" for back.
Plywood, 1½x37½" for back extension.
Plywood, 11½x36" for film-storage lid inside main lid.
1 or 2 iron braces to hold upper part of box when open.
5 strips of wood or plywood, 1½x1x36" for film-storage compartment.
10¼ strips of wood or plywood, 1x1½" for separators for film-storage compartment.
1 piece of wood, 2x6x8", grooved to hold 8mm. or 16mm. reels.
Light oak stain or varnish for out side.
White paint or enamel for inside (if you wish).

I think the sketches and the photograph show how the case is made, so there's no use boring you with a long description. When closed, the case is 12¼" wide by 15" high by 37½" long. The hinges on which it opens are placed at the back, just a little below the upper rear corner.

When the case is opened, the rear side of the upper section, which is fitted with little square pigeon-holes 1½" square by about 1" deep, forms the film-storage compartment. There's a plywood inner lid hinged to swing up and out of the way when you're editing film, which drops down in front of the storage compartment so that it holds the film in place when you have the case closed. Two little wooden dowel-pegs fit into holes in the upper end-panels to hold this lid in either position, and an iron brace holds the top of the case up when in the open position.

You can fit up the bottom of the case any way you like, and fit in any combination of rewinds, viewers, etc., you find convenient. In mine, you'll notice I've used two sets of rewinds and a pair of Eastman editing brackets, with one Craig action-viewer and one non-moving viewer. I've also found a Bell & Howell film cleaner very useful.

Even if you don't care for such elaborate accessories, I can strongly recommend providing several spindles on the back of the box (lower part, of course) for holding reels with which you're working, and a grooved block to hold a number of small laboratory projection spools. The socket for an electric light is obviously necessary (it's even better if you can shade it so the glare won't be in your eyes), as is the provision for plugging in your viewers, etc.

If you want to do things the simplest

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It's Easy To Prepare A Script For Your Movies

By W. G. CAMPBELL BOSCO

FROM the technical viewpoint there is nothing wrong with amateur movies. You can go to almost any cine-club meeting anywhere and see plenty of pictures which, so far as photography is concerned, would win commendation from any professional. Between observing the work of the professionals in their theatres and zealous study of tips gleaned from the better photographic magazines the average cineamateur has picked up enough of the theory and practice of cinematography to make his pictures well worth seeing.

But there's one thing that too few amateurs seem to have learned. That is how to prepare and use a script, or, if you prefer it, a continuity or scenario. Some of them seem to feel there's something mysterious about the word "script"; others have the impression a script is something that is useful only in making a scenario picture or photoplay. Others just naturally shy away from anything that sounds like "script."

The fact of the matter is that *any* picture will be better for the use of a script, even the simplest sort of cine-snapshots or vacation film. For example, the other day one of my friends showed me a reel of particularly interesting vacation pictures. After the showing was over, I couldn't help asking him why he didn't put a few more scenes in here and there throughout the reel to tie him and his family into the scenic shots.

His reply was that he simply didn't think of it at the time—and when he did, it was too late, for the vacation was over, the film processed, and he was in the midst of editing it.

A script would have helped him. After all, a script is a blueprint, a plan. It takes into consideration all the elements of the story, and plans the best way of shooting them for presentation on the screen. It anticipates, or should try to anticipate, every situation and prepare for every circumstance.

It has the advantage of being planned objectively when the cameraman is not primarily concerned with purely camera matters. And, to those who haven't tried it yet, there's as much fun in scripting, or if you prefer, planning a picture as there is in filming it. Try it next time you make a picture!

No matter what the subject, your movie will be the better for having been prepared in advance. And lest there are some who might feel that they might lose by being bound to an ironclad script, yet then remember that hardly any picture follows its script religiously. As the story develops, so does the script. Opportunities present themselves and improvisations are made.

"But", says the man who is an inveterate travelogue or vacation movie-maker, "I don't need a script. I shoot the scenery and points of interest and things like that. Why, I couldn't make a plan or write a script for my pictures, even if I wanted to, because I don't know what I'm going to film till I get there."

Well, he's wrong. Perhaps he doesn't need a script in the same way and for the same purpose that the maker of a 'story' film needs one. But his pictures would be the better for having a continuity that had been thought out, as far as possible, beforehand.

The proof, if proof is needed, is in those travel and vacation movies that we have all seen, which are made more interesting by the thread of continuity that runs through them, and by the little human touches that brighten.

But for the sake of harmony, let us agree with this man and say that he doesn't need a script. Let us say that all he needs is some notes. And let the notes be written from his own experience. They would naturally include things to do that have been found successful before in similar movies, and things he wished he'd done, but hadn't thought of in time.

Such notes would be full of "reminders." "Reminders" to get plenty of close-ups. "Reminders" to prevent one from getting home, sitting down to edit the film, and saying, "Darn! I forgot to get that shot."

If such a man would start making just such notes he'd be writing a script, adequate for the needs of his picture, before he knew it.

Because the majority of amateur movies concern themselves with the filming of activities that are more or less extemporaneous, let us consider the scripting of just such an event. Of course, every film, every event, every excursion is different and presents its own problems. But certain fundamental rules can be applied, with variations limited only by the imagination of the producer.

The following treatment is not an attempt to be brilliant or even original. It merely attempts to show, by illustration, what can be done in the way of adding interest and continuity to what might be just another reel of film.

The subject is a picnic. The characters are the movie-maker's family. There have been other picnics, and other movies have been made of them. This one is going to be different. The other movies of picnics have almost always begun at the picnic and have been of little interest to any one except those who were there. This time we let the audience in on the planning of the picnic and take them along from the beginning.

Actually we don't know what is going to happen at the picnic. Some of it we can imagine. Some we can plan and stage. But we *do* know what's going to happen before the picnic and after it because we are going to make it happen . . . for the benefit of the camera.

We decide, let us say, on the following idea for an introduction. It is Sunday morning. Mother and father and the two children are sitting in the garden (or the living room). Father is deep in the paper, mother is sewing.

One of the children suggests a picnic, the other supports the idea vigorously. Father says no. The family asks why. He says that there is no gas. All right, they say, let's walk. So, with a last longing look at his comfortable chair and unread paper, father capitulates.

Such a story can be told in the following scenes or takes:

Scene 1. Close-up of porch floor. A folded newspaper with the word "Sunday" in view drops into the picture. An arm clothed in dressing gown reaches into the picture and takes the paper.

Scene 2. Medium-shot. The owner of the arm in the above picture walks in with his paper and stretches luxuriously before sitting down in a comfortable chair.

Scene 3. Medium long-shot (another angle). Shows father reading, mother sewing and the little girl playing with her doll.

Scene 4. Medium close-up. A door. It bursts open and little boy enters. He runs through.

Scene 5. Medium long-shot (as in Scene 3). Little boy rushes up to mother.

Scene 6. Close-up, little boy and mother. He says "Let's have a picnic."

Scene 7. Medium-shot, little girl. She looks up from her doll, then gets up excitedly.

Scene 8. Medium shot, mother and both children. Very animatedly they are both asking her if they can go on a picnic.

Scene 9. Close-up of father. He glances apprehensively out of the corner of his eye in the direction of his family, then settles more resolutely into his chair and behind his paper.

Scene 10. Medium-shot, mother and children. Mother pulls them close to her and tells them "Go and ask your father." Exit children.

Scene 11. Medium-shot, father still blissfully reading. The children enter. One of them pulls at the leg of his

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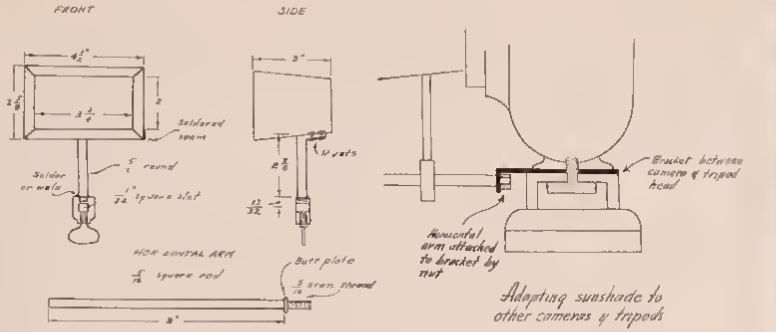


Adapting sunshade to other cameras & tripods

A Professional Sunshade for the Eastman Special

By CARL MURRAY

Supervisor of Photography
Motion Picture Division
American Telephone and Telegraph Co

FOR a long time I've been in hearty agreement with the various writers in THE AMERICAN CINEMATOGRAPHER who have indicated that they thought the usual "lens shades" supplied with 16mm lenses were of little account. For the not too critical novice amateur, they're certainly better than none at all: but for the 16mm professional or the advanced amateur, they're decidedly inadequate. Compared to the sunshades used professionally on 35mm equipment, the protection they offer from extraneous light is negligible. Particularly have I felt that a really protective sunshade might have a definite bearing on Kodachrome quality.

As I was unable to find anything of this type commercially marketed, I designed and had made a professionally satisfactory sunshade for my personal camera, an Eastman Cine-Kodak Special. The photographs and diagrams reproduced herewith are, I believe, largely self-explanatory, but I might enlarge on one or two points.

The horizontal supporting arm is simply threaded to enter the front or vertical tilt-handle socket of the Eastman Cine Special tripod.

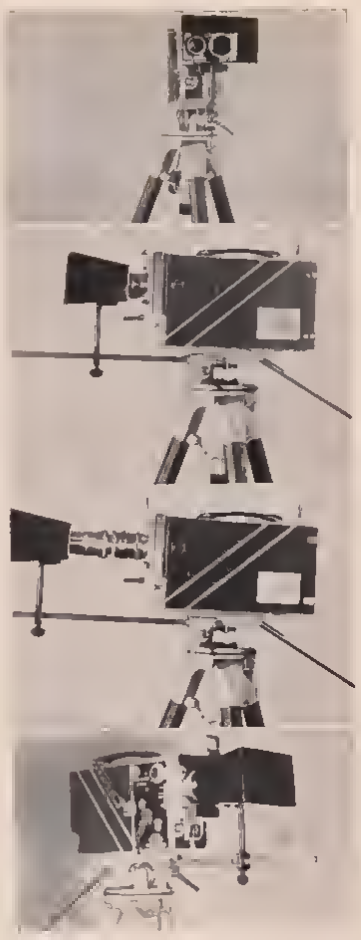
The sunshade itself has not been constructed to particularly exacting specifications, but it has ample clearance for the Eastman 15mm, 1 inch, 2-inch, 2½-inch and 3-inch lenses, with any combination on the turret. It will be noticed that the sunshade has been designed with sufficient width so that *both* of the lenses on the Cine-Special's two-lens turret fit inside the rear opening of the sunshade, making it unnecessary to remove one lens from the turret to accommodate the sunshade, as might be necessary with a lens-shade of smaller dimensions. The dimensions given on the diagram are correct as far as they go. However, the final assembly must be more or less of a cut-and-try proposition; otherwise interference may occur with the finder, lenses or special accessories.

The sunshade itself is made of 20 gauge galvanized iron, and the rest of cold-rolled steel. The shade is lined with black felt, glued in place with waterproof glue. The sunshade with its supporting rod and sliding collar are strong enough so they can be used as a wrench to draw the horizontal arm against the butt collar, and thus level the arm.

The device is convenient to use, involving only sliding the shade out toward the end of the arm when adjusting or changing lenses, but even so, I would not bother with it were I not convinced that it brings a readily discerned improvement in color and definition, particularly, as might be expected, when shooting near a strong light-source, or in highly reflective surroundings.

Although only a crude adaptation of professional 35mm sunshades, it seems to do the job, even though it could be refined in various ways. Among these refinements might be mentioned the adaptation shown in the sketch for using the device with other types of cameras and tripods.

Another refinement, which would be decidedly necessary when using a camera like the Filmo, with a finder at the side, or a Cine-Special with an auxiliary finder mounted in this position, would be to pierce the left hand side of the sunshade with louvres. This would permit keeping the side-mounted finder in the normal position, close to the lens.



The louvres, presenting themselves edge-on to the finder, would not interfere with the finder appreciably, yet would continue to give satisfactory sunshade protection to the lens.

Another refinement which would probably further improve the results obtained with the sunshade, would be to fit small baffle-plates inside the sunshade, as is done on many professional sunshades.

Still another refinement, which would be of greatest value to those doing most of their filming in black-and-white, and outdoors, would be to provide a slot in the left side of the sunshade, just in front of the rear opening, into which the standard 2-inch square glass filters could be slipped, either directly, or in a convenient metal carrier. This would simplify the 16mm professional's filtering problems, as a single set of standard 2-inch glass filters could be used with all lenses, instead of a much larger assortment of duplicate filters individually mounted to fit each of the user's various lenses.

It is a pleasure to pass this design on to the readers of THE AMERICAN

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Scenario For Filming
A WARTIME THANKSGIVING

By J. DICKINSON REED

THE movie formula that has served us all so well for many peace-time Thanksgiving movies doesn't fit very well this year. Too many of the former ingredients have been ruled out "for duration." Too many things we used to take for granted as part of the Thanksgiving festivities can no longer be done. Besides, I think all of us are approaching this Thanksgiving with an entirely different spirit—in these wartime days most of us have much more to be thankful for than merely a table-ful of roast turkey.

Movies made this Thanksgiving—and of course we want to make them—ought to reflect these changes. They ought to show something of the limitations which have made such changes in our Thanksgiving plans. And they ought to express something of the more serious spirit of this year's holiday.

Here's a scenario for a Thanksgiving home movie which attempts to do that. You can amplify or modify it to suit your individual needs.

Main Title "Thanksgiving—1942"

Scene 1 FADE IN. Full screen insert of page of a large calendar which shows the month and year prominently, and of course the Thanksgiving day date.

Scene 2 Full-screen close up of calendar date of the Sunday before Thanksgiving.

Scene 3 Long-shot of the family, seated around dinner-table, just at the end of their usual Sunday dinner. Mother leans forward and speaks.

Scene 4 Medium close-up of Mother, speaking.

Title "What shall we do this Thanksgiving?"

Scene 4-a Same as Scene 4. Mother finishes speaking, and looks around at family.

Scene 5 Medium close-up of Dad. He holds out gas rationing book and speaks, shaking his head.

Title "Can't drive out to Grandma's—no gas!"

Scene 5-a Same as Scene 5. Father finishes speaking, and looks glum.

Scene 6 Medium close-up of young son Dick. He speaks.

Title "Can't go to the football game. My shift at the plant has to work Thursday afternoon."

Scene 6-a Same as Scene 6. Dick finishes speaking.

Scene 7 Two-shot of two smallest children. Both start to speak, stop, look at each other, and finally the youngest girl speaks.

Title "Sugar ration's about gone—not even any hard-sauce for the plum pudding!"

Scene 7-a Same as Scene 7. She finishes speaking, and her young brother, Tom, suddenly realizing the calamity, bursts out—

Title "Gee, what have we got to be thankful for?"

Scene 7-b Same as Scene 7-a. Tom finishes speaking and looks exaggeratedly glum.

Scene 8 Medium-shot of Mother. She looks around in surprise. She reaches out and picks up the newspaper from where one of the family has dropped it, and points silently to a big headline.

Scene 9 Insert close-up of headline. NAZIS WIPE OUT TOWN. (This can be made by carefully pasting this headline, which most papers carried not long ago, across the front page of a current edition with the proper date.)

Scene 10 Medium close-up, panning slowly around the table, as the various members of the family show realization of what Mother means.

Scene 11 Insert: close-up of telephone.

Scene 12 Long shot. Father hears the phone ringing, gets up and goes to answer it.

Scene 13 Medium-shot. Father, talking on phone. He suddenly begins to smile, nods agreement, hangs up phone and starts toward camera.

Scene 14 Long-shot of Father, re-entering dining-room. He speaks.

Title "That was Cousin Don. Grandma's coming in to visit them, and they'll all come here on the street-car Thursday!"

Scene 15 Long-shot (reverse angle) of family at table as they react to news.

Scene 16 Medium close-up of Father, speaking.

Title "Mama and Cousin Mary will team up on the dinner. And—they've plenty of sugar!"

Scene 16-a Same as Scene 16. Father finishes speaking.

Scene 17 Two shot of two youngest children as they react happily to this, obviously with thoughts of plum pudding and hard-sauce in mind. FADE OUT.

Scene 18 FADE IN. Insert—close-up of Thanksgiving date on calendar.

Scene 19 Long-shot in dining-room. The younger children are busy getting the table set for the Thanksgiving meal. If practical, it would be effective to show in background Mother scurrying around in the kitchen.

Scene 20 Insert: close-up of doorbell ringing, or hand pushing bell-button, as may be convenient.

Scene 20-a Same as Scene 20. Children rush to answer doorbell.

Sequence A (*ad lib*) Shots of the other relatives arriving, being greeted by family, etc. End with FADE OUT.

Scene 21 FADE IN. Long-shot of table, everyone settling into place, as Mother brings in the turkey. She places it before Father, and sits down in her own place.

Scene 22 Close-up of Mother, as she looks happily around table.

Scene 23 Medium close shot, panning slowly around table.

Scene 22-a Same as Scene 22. Mother finishes surveying the family, and looking happy, but a bit regretful, speaks.

Title "Everything would be perfect, if only Bill were here."

Scene 22-b Same as Scene 22. Mother finishes speaking, and looks out of the scene.

Scene 24 Insert. Close-up of Service Flag in window, shot from inside house, and back-lighted if possible.

Scene 25 Insert: close-up of photo of eldest son, in civilian clothes.

Scene 26 Insert close-up of hand pressing doorbell button.

Scene 27 Long shot. Everybody looks up. Person sitting nearest door goes to answer the doorbell.

Scene 28 Medium long-shot in door of dining-room. Very suddenly, into view comes Bill, in military uniform, unexpectedly home on leave.

Sequence B (*ad lib*) Close shots of family as they swarm to greet Bill.

Scene 29 Long-shot of family, again at the table, beaming, with Bill in the place of honor.

Scene 30 Close-up of Mother. She speaks.

Title "With Freedom, plenty, and our loved ones, we've more than ever to be thankful for this year!"

Scene 30-a Same as Scene 30. Mother finishes speaking.

Scene 31 Medium long-shot of the group at the table (slow pan, if necessary) nodding agreement. FADE OUT.

Title The End

Off-The-Beaten-Path Moviemaker

By GEORGE BLAISDELL

HARRY E PARKER, member of the Los Angeles Cinema Club, entertained a party of friends at his comfortable home in Los Angeles early this month. He showed nearly eight hundred feet of 16mm Kodachrome film. He really entertained them, too. The pictures had been exposed in the Yosemite country, in the high Yosemite country, to be precise—not alone in the spots made so familiar to the world at large through visitations of camera-addicts both small and great. Included in the searching out by the camera was territory away from the haunts of the beaten-pathers, where the scenery carried a sweep—and a thrill—that are out of the usual.

Harry Parker is something of a traveler, and has been all his life. Speaking of the Yosemite, he should rate as a veteran visitor in that great region. The recent trip started him on the way toward the second score of times he has absorbed the beauties of the Yosemite.

Yet he is qualified to estimate the Yosemite as a contender for world honors strictly on its merits. Of the world's glories he has seen with his own eyes what is presented to one man in four trips around the world. To that may be added three extended journeys about South America, also to the Mediterranean, to the Caribbean, to Mexico, to Alaska and to Hudson's Bay.

The guests at the showing, like all close friends of the cineamateur, have been close followers of the ups and downs of his camera from the very first. So they could all speak with knowledge of the circumstances when they declared the pictures they were following represented Mr. Parker's best work photographically.

The photographer modestly declined to accept any unusual credit for his work. He insisted he had had the benefit of the counsel and guidance of Guy D. Haselton, well known and veteran camera artist, his companion of several weeks.

Many of those who have not personally visited Yosemite may have a misconception of the layout of the land. The valley floor, where are situated the more familiar business places and the residences, is only a mile wide and a few miles long. But Yosemite National Park itself comprises 1189 square miles.

The surrounding territory, the high country, has been divided into day's stints for horseback riders, into distances that will make a comfortable ride and enable tourists to arrive sufficiently early to allow man and beast—and of course women if they are along—to get abundant rest.

The journeys are set for six days, with comfortable camps at the end of each day—with meals and sleeping accommodations. Outdoor fires are extinguished at 9:30 at night, which means at 10,000 feet altitude, as it often is, there is a real tang in the air. Those who sometimes overestimate their resistance to cold weather are quite certain to feel the sting of Jack Frost.

Mr. Parker's trip, of course, was a pack trip, a mule pack trip, wherein the mule did a certain amount of what to some animals is trotting. The ground, of course, was none too even. Neither was the gait of the animal. On the contrary, it bounced. And right away it bounced again. The net results of the animal's efforts were one camera, damages to the extent of $6.50; one tripod damaged, and one Weston meter decidedly in need of a successor. Advice was extended that it would be wise to retain possession of the damaged meter, and the meter was accordingly placed in the household archives.

"Among the places visited on the trip were Merced Lake, 7100 feet," said Mr. Parker. "The party stopped there a second day. The trip was continued through Washburn Lake, where the limit was taken in trout. We arrived the next day at noon at Vogelsang Camp, 10,000 feet elevation. On account of the great amount of snow on the trail we went over the Fletcher Creek route.

"On the following afternoon we went by way of Rafferty's Creek to Tuolumne Meadows, 8600 feet elevation. At noon the next day we reached Glen Aulin, 7800 feet, and from there went to Waterwheel Falls.

"This was the most rocky and rugged country I have ever experienced. Due to the heavy snows and rains the falls were at their best. We went back to Glen Aulin, right alongside thunderous waterfalls. It was cold and we slept with everything we possessed, but the consciousness of that great roar from the Cascade Falls seemed to remain. The next day after we moved along we could feel the silence.

"We followed the McGee Lake trail to May Lake, 9270 feet, at the foot of Mount Hoffman. Here we proved to be the first group in for the season. We found here snow three or four feet in depth. In early July at these altitudes it is light until 10 o'clock.

"Working in those high altitudes, exposure is a most important point for the photographer to watch. Due to the thinner air of these higher altitudes, light values are entirely different from those most of us meet in our usual, stay-at-home filming.

"Not only is the direct sunlight considerably more intense than at lower altitudes, but because the thinner air does not diffuse and reflect the light as it does at lower altitudes, there is much less light in the shadows than we are accustomed to.

"Shooting Kodachrome at 5000 to 10,000 foot altitudes, under weather conditions which at home we would expect to give us an *f* 6.3 or *f*:8 exposure, it is not at all unusual to find scenes in direct sunlight which call for an exposure of *f* 11. At the same time, exposure values in the shade of a single tree—not too leafy—may require an aperture from *f* 4.5 to *f* 2.5. If you are in heavy shade, as when shooting under a grove of well-foliaged trees, an opening of *f* 1.8 may be none too much.

"The best rule to follow is to use your meter carefully and *selectively*. Determine whether the parts of the scene in which you are most interested lie in the sunlight or in the shadow, and then take your meter-reading and expose for that particular area. The rest of the picture will have to take care of itself.

"If you expose for the sunlit areas, the shadows will be largely lost. If you expose for the shadows, the sunlit parts will be badly overexposed. This does not always make for the most perfect photographic quality, but it is the most consistently successful method to follow under these high-altitude conditions.

"The real secret of success in working at these high levels is to plan one's com-

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AMONG THE MOVIE CLUBS

FILM WANTED!!

The Syracuse (N. Y.) Movie Makers Association needs films, urgently. According to President D. Lisle Conway, the Club "Has the honor of supplying film programs for the recently-erected Army Air Base near Syracuse. Consequently the Club's facilities for supplying program material are being taxed to the utmost, but even with the help of several other Clubs with which the Syracuse group has exchanged films, the supply of film is far from enough for planning regular programs that will be of any value from an entertainment standpoint."

The patriotic Syracusians are thereasking us to broadcast an urgent S.O.S. to other clubs and individual amateurs throughout the nation, asking for information as to films which could be made available for showing to these Army men. President Conway continues, "These men are from all parts of the country, and therefore any films which could be obtained from all parts of country could be used; providing, of course, that they are not what is commonly known as the 'personal' type. Films of travel, scenarios, local newsreels, etc., will be acceptable. These films will be run on good projectors and only by thoroughly responsible members of the Club, and will be given the best of treatment."

Therefore we urge every reader of THE AMERICAN CINEMATOGRAPHER who has such films to list them with President Conway of the Syracuse Club. The listing should include the following information as to each film: Title of film; Producer and producer's address; whether black-and-white or color; sound or silent, and if sound, whether sound-on-film or sound-on-disc (the Club has facilities for either type); 8mm., 16mm. or 35mm.; type of picture—travelogue, scenario, educational, newsreel, or other, locale of pictures taken, and any incidents pertaining to them if possible, footage, dates available; and whether these pictures were produced by amateurs or professionals.

Conway concludes "I know this is a big order, and probably will not be filled in a hurry. However, we want to assemble as much information as possible and are willing to make this information public for the benefit of other clubs with similar problems. In short, we are willing to act as a clearing-house in this matter for other clubs.

"The important thing from our standpoint at the immediate moment is that we assemble as big a list of films available so that we can quickly prove to the Army authorities that we amateurs can adequately supply them with good films and programs from all over the nation at regular intervals. This is being done as a public service on our part with no remuneration to us, and therefore we are not in a position to rent films for the Army. Also, due to our limited budget, we are in a position to pay the postal charges only one way, namely, back to where the films came from. Under these circumstances, I hope that other clubs and individuals will have enough of the old spirit to cooperate with us and enable us to entertain the boys from their locality with films. How about it?"

All communications regarding this extremely worthwhile project should be addressed to the Club's President, D. Lisle Conway, 100 Trinity Place, Syracuse, N. Y.

"Red Cloud" for M.M.P.C.

Following Program Chairman Joseph Hollywood's plan of showing famous amateur films of the past at meetings of New York's Metropolitan Motion Picture Club, the October meeting featured a revival of "Red Cloud Lives Again," with which Dr. F. R. Loscher of the Los Angeles 8mm. Club won premiere honors in THE AMERICAN CINEMATOGRAPHER'S International Amateur Movie Contest in 1935. Another highlight was "Fire From the Skies," the Civilian Defense sound-film made by the Long Beach (Cal.) Cinema Club. Also shown were "Miscellaneous Meanderings," by Murray Tucker, and "Florida," Grand Prize winner at the 1942 Mineola Fair, by George Mesaros.

ROBERT M. COLES,
Secretary

Minneapolis Interiors

October meeting of the Minneapolis Cine Club, under the guidance of Jerry Peterson, highlighted a demonstration of "Angles in Indoor Filming." As planned, the committee was to shoot a movie of typical indoor scenes often shot in any home, and supplement these with the projection of Kodachrome mini-slides showing the overall plan of lighting, camera and other equipment, accompanied by a talk on lighting by a member of Len Martin's program committee.

ROME RIEBETH.

Gadget Show for Westwood

The Westwood Movie Club of San Francisco held its first Gadget Exposition on Sept. 25th. This was an innovation in Bay Region amateur movie circles, and proved a huge success. Throughout the evening a crowd of more than 250—visitors from other Clubs, from the Museum of Art's Photo Forum, students from the University of California movie courses, and individual moviemakers—filled the auditorium where some 75 gadgets made by members of the Club were exhibited and demonstrated. One section of the hall was devoted to the showing of members' prize-winning films, and drew an S.R.O. sign for every performance.

GEORGE LOEHRSEN,
Publicity Chairman

Meters, Sound for Washington S.A.C.

The October 19th meeting of the Washington Society of Amateur Cinematographers featured a talk on proper use of exposure-meters by W. A. Reedy of Weston, a talk on sound-recording by O. W. Hungerford, and the screening by Member Comings of a film describing the National Archives. Members were also asked to bring in their scenarios for the proposed Club Production.

JOHN T. CHEDESTER,
President

"Horse Opera," Election, for 8-16

A horseless "Western," "Buzzard Juice," filmed by the Penn-Art Movie Group, and a mystery, "The Ghost of Greystone Manor," by the same group, highlighted the screen fare at the September meeting of the 8-16 Movie Club of Philadelphia.

Nominations were also made for next year's officers, punctuated by an unusual number of "I declines" as names were proposed. The slate finally nominated included William Bornmann for President, George Burnwood for Vice-President, Phil Oetzel for Treasurer, and Mrs. Helen Bornmann and John Hendricks contesting for the Secretaryship.

LEON MERROW.

Railroads and Scenery for L. A. C. C.

The October meeting of the Los Angeles Cinema Club was highlighted by a surprise preview of the New York Central System's 800-ft. sound film "Freight Yard," brought by William Stull, of THE AMERICAN CINEMATOGRAPHER. Mrs. Mildred Zimmerman showed two reels of Kodachrome views of the German countryside filmed in the summer of 1939, and Richard Orlow showed "West of the Rocky Mountains," with musical accompaniment. H. W. "Jimmie" Scarborough, of Winter, Inc., gave a fine talk on ideas for making better pictures.

RAYMOND McMILLIN,
Secretary-Treasurer

Developing Machine

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a considerable extension of the latitude of reversal film processed on the Houston machine. Test exposures at *f* 3.5 made on a standard reversal emulsion in light which would normally call for an *f*.16 exposure are stated to have resulted in a readily discernible image, whereas identical overexposures given standard commercial processing resulted in virtually clear celluloid.

Temperature control is obtained in the Houston machine by immersing the solution tanks in a water-jacket which is in turn maintained at the correct temperature by refrigerating and heating units, self-contained within the machine. The air supplied to the drying compartment is filtered and electrically heated.

In operation, the machine is remarkably simple. Chemicals for the various solutions are supplied in pre-measured packages, so that all the operator need do is dissolve the contents of the package, in the specified amount of water, and in the order indicated by numbers on the packages. Each package of chemicals provides sufficient solution to process 10,000 feet of film, after which the tanks are drained and fresh solutions mixed.

A very clever arrangement is used to measure precisely the amount of film the machine processes, regardless of how much leader may be spliced between various batches of film. An opaque leader is used, and as the film passes from the dry-box, it passes over a photo-electric cell. This electric eye governs the operation of the footage counter, permitting it to operate only when film with a transmission factor equivalent to that of the densest possible underexposure is scanned. When the completely opaque leader passes the photocell, the footage counter automatically ceases to register. Thus only that film which is actually acted upon by the solutions is registered on the counter.

In the field, the machine's power lead need only be connected to any electric power line, and hoses attached to a water hydrant and drain. Then when a fresh magazine of exposed film is put in place, all that is needed is to press the starting button. Less than thirty minutes later the finished film will come off the machine, ready to project. The usual safeguards against breakage of the film or inattention on the part of the operator are of course supplied, with audible warnings which, if not answered, are followed by automatic stoppage of the machine.

Several hundred of these machines are now in use in various parts of the world by the motion picture section of the U. S. Army Air Forces, operated by Air Force crews specially trained in the Houston plant. Similar machines are also under test by other U. S. Army and Naval photographic units.

Modifications of the machine include a similar machine with non-corrosive metallic parts and special, non-spillable tankage for seagoing Naval use, and a slightly larger machine for handling either 16mm. negative or positive, with provision for by-passing the negative-developer tankage when positive film is being developed, and vice-versa. A similar machine is in the experimental stages, employing a two-strand design, with each side of the machine driven semi-independently, so that one side may be developing negative while the other processes positive, or either side operated singly.

For 35mm. a similar, though necessarily larger machine is built, intended primarily for fixed-base operation in a suitable darkroom. The same basic design is followed, and the machine is laid out for one-man operation. Either negative or positive film may be processed, by-passing the negative or positive developer tankage as the case may be. A variable-speed control is provided, allowing a range of from 15 to 30 feet per minute when developing negative, and from 30 to 60 feet per minute when developing positive.

Canada's Commandos

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ly rainy. We got up there three days ahead of our scheduled start of shooting, and landed in a typical rainy spell. That continued until the morning of our first shooting day. Then it dawned clear, and stayed that way until the last scene was in the box. Then it turned to and rained again!

We built a complete Norwegian village there on Vancouver Island, and did a large part of our picture right there. There were no roads leading to our location—so we had the experience of using several brand-new Commando landing-barges for seagoing "location trucks." It was quite an experience to chug up the sound in one of those barges, pull up against the beach, drop the gangway, and walk ashore a lot more easily than if we'd had a regular dock—and within a stone's throw of where we were to set up!

Some of the locations were on the strenuous side. Getting the cameras set up on a rocky cliff-side so steep we had to string ropes to help us get into place gave everybody—especially the camera crew and grips—plenty of exercise, and when we had to plant good-sized anti-aircraft guns in similarly inaccessible places, well, we all knew we'd been working by the time the sequence was done!

As we were in the dim-out area, we naturally didn't shoot any night exteriors. However, we filmed plenty of interiors there. Some, we built as practical parts of our sets. Others, we built inside an auditorium at the County Fairgrounds. That was a big, roomy box of a building, excellent for our purposes, even though there was enough reverberation to give the sound men plenty of trouble. But by hanging big panels of hurlap around the walls, we managed to get satisfactory recordings anyhow.

We made several night-effect shots that would be hard to duplicate, in that building, too—scenes of Nazi antiaircraft crews at their guns and searchlights, and so on. We "cheated" a bit here, illuminating the gun or searchlight, and letting the background and most of the foreground go black, to suggest night. In that, I want to express my appreciation of the cooperation Director Farrow gave me, for as in our previous picture together—"Wake Island"—we were able to work together and let that sort of photographically sketchy treatment build dramatic effectiveness, while at the same time simplifying our production problems.

Another thing that we found surprisingly painless was the sensible way the Canadian authorities handled the problem of censorship. Working right in an active military area, we naturally expected to encounter some censorship difficulties. But we didn't. Our stills had to be developed and examined up there, but the movie film was pre-censored and went through as easily as though we'd been shooting on the home lot. We had liaison officers with us from the Army, Navy and Air Force, of course, and now and then one of them, after checking through the finder as we lined up, would suggest we might move the camera a bit so as not to show this bit of coast-line or that hill. On the other hand, they'd often suggest "Why don't you shoot this . . . or that?" when even though we might have wanted to, we'd decided "this" or "that" might probably be on the military restricted list! Even on the speedy Auxiliary Cruiser the Navy put at our disposal for several days (it was once a well-known CPR Alaska-cruise steamer), there were incredibly few things we couldn't shoot. The only one I remember is a perfectly innocuous-looking radio-aerial . . .!

All told, you've got to hand it to those Canadians for their hospitality and cooperation to visiting picture-makers. We came back with twice the pictures we expected to have. And—once those young Commandos get into action, I think they'll do some "handing out" that, if what they did for our cameras is any criterion, will be most unpleasant for the Nazi or Jap on the receiving end!

Combat Camera

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mounted solidly, rather than rotatably, and the turret need only rotate to bring the various lenses into position. There is virtually no play perceptible in either the quick-change lens-mounts or the turret assembly.

The finder is a simple "positive" type, giving a large full-field image for the 35mm. lens, and using an etched frame for the field of the 3-inch objective and the 6-inch telephoto. Two small levers move supplementary optics into place to give a magnified field for the telephoto lens fields. The field of the 10-inch lens

is indicated simply by a central dot, as this lens will probably be used only for extreme distant shots, such as following an airplane, or the like

In use, the camera is amazing In the first place, it is incredibly much lighter than one expects since, with the exception of a few small, highly-stressed moving parts, necessarily built of steel, the entire camera is made of magnesium Loaded and ready for action it weighs but 13 pounds—or 15 pounds when the 10-inch telephoto is in place.

In the hand, the camera balances perfectly. It seems as easy to follow action with it as with a rifle For stationary shots, the gunstock mount and two-handed grip give incredible steadiness Motor and movement are so smooth-running that the Cunningham camera is probably the smoothest-starting hand-camera this writer has ever seen In addition, the pilot-pin registering movement provides for professional steadiness of the screened image

The new camera owes its inspiration to suggestions made over a year ago to Cunningham by some of the top-ranking members of Commander Ford's Naval Photographic Unit, and has been developed with the benefits of the experience some of these cinematographers have gained in actual service cinematography The RKO Studio patriotically permitted Cunningham, who heads their precision camera machine-shop, to design and build the first cameras in their plant

The design, however, has been planned from the start for mass production, so that as and when the military authorities approve it, the cameras can be turned out in quantity in any larger plant accustomed to precision work It is probable that since 16mm has taken root so strongly for military cinematography (a development which has taken place since engineering on this camera commenced) a 16mm adaptation may well be made It certainly should be

Cunningham's camera seems certain of a brilliant future as a strictly military instrument, but once the war is over, it should have an even greater future in peacetime cinematography For when such things are again feasible, it should be unexcelled for newsreel, sports and expeditionary camerawork, as well as for innumerable uses in scientific and industrial cinematography. END

Arthur Edeson

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your ability will mean more, and you can be sure of a longer and steadier career?"

Art thought the idea was good And when, not long after, his friend persuaded the Eclair powers that be to offer Art the post of official studio portrait photographer he accepted with alacrity. He cleared out a corner of the studio laboratory's hypo-room to serve as a darkroom for his still work, and snapped his exposures on the studio stages whenever and wherever he could And from the start, his portraits "clicked."

But the more Edeson saw of the picture business, the more clearly he saw that the job he wanted was behind a motion picture camera Getting there, though, was another matter. There was no possibility of wangling a job as an assistant cameraman, and thence working his way up to First Cameraman For, thirty years ago there were no assistant cameramen. The cameraman—there was only one to a troupe—did everything He loaded and unloaded the camera, photographed the scenes, and nearly always edited the picture as well. In his spare time he also shot the stills and developed them

Moreover, that was in the days of the "trust"—the Motion Picture Patents Company And whether your studio was a licensed member of the trust, or an outlawed "independent" using presumably unlicensed equipment, the camera—and especially its interior—had to be a profound secret If an outsider got even a glimpse of the inner workings of a movie camera that glimpse might, if it were a camera of one of the "trust" companies, let out trade secrets to a potential enemy spy; if the camera belonged to an independent, a peek at its mechanism might bring a visit from the "trust's" strong-arm detectives, resulting in a wrecked camera, and maybe a lawsuit, to boot

None the less, Edeson managed to learn a great deal about cinematography as it was then practiced In this, he learned partly from observation, and partly from the help of his friend, John Vanderbrook who, he points out, was one of the really great cameramen of that pioneer era

Eventually, Edeson got a chance as a cameraman One of the cameramen fell sick during a picture, and at Vanderbrook's suggestion, still-man Edeson was asked to pinch-hit and finish the picture He did it successfully—and from then on, he was one of Eclair's cameramen

He had the unique distinction of being the only American cameraman in the employ of this French firm In those pioneer days before World War I, French directors and French cameramen dominated the creative side of the industry; any studio which had any professional pretentions at all had at least one French director and one French cameraman to lend a touch of éclat and genius to its productions The Eclair studio being an American branch of a French firm (which, by the way, was still operating in France up to the arrival of the Nazis) had Frenchmen in almost all of the key creative posts. Edeson's success as a cameraman under these circumstances was therefore a tremendous tribute to his ability

At any rate, he so pleased Eclair's owner, M Jourjon, that he became one of Eclair's leading cameramen

The work wasn't without its difficulties, however. That was the day when *f* 64 definition and flat lighting were the rules of the day Edeson began to introduce some of the lighting ideas he had learned in his portrait work—a suggestion of modelling here, an artistically-placed shadow there. And being trained in portrait work, his work tended to the softer, portrait-like quality he had used in his still work

"That," he says, "was so completely out of line with what they considered good cinematography in those days that I had to use all sorts of salesmanship to convince them it was good camera-work

"Privately, I wasn't so sure In my spare time I did a lot of experimenting, and I just never could get anything critically sharp. While I argued the artistic merits of softness, I did a lot of wondering as to what was the matter.

"In time, I found out Another producer—he was Jules Brulatour, by the way—was about to make a very special picture He wanted by friend Vanderbrook, but Vanderbrook was tied up on an assignment for Eclair, and recommended me.

"The camera provided for this picture was equipped with an unusually fine lens—a Goerz Heliar, I believe Using it, I discovered that my other lens had been defective, inherently unable to produce a really crisp image. I never forgot that first striking lesson in the difference that exists between individual lenses From then on, I made it a point to study lenses, and learned how to suit the optical qualities of each lens to the job in hand"

This first big assignment of Edeson's was a made-to-order opportunity for a cameraman Most of the picture was filmed on location in the south, with almost perfect weather conditions, and picturesque locations with magnolias, Spanish moss, and everything a camera man could ask for pictorial photography Edeson made the most of it, and turned in a picture so spectacularly beautiful that producer Brulatour was delighted. And when, not long after, the American Eclair company was reorganized as the World Film Co, with Brulatour at its head, Arthur Edeson was recognized as one of the organization's ace cameramen

He was assigned particularly to photograph the productions of Clara Kimball Young, one of the industry's biggest stars And when Miss Young left World to form her own Company, he went with her When her organization moved to the West Coast in 1915, Edeson, too, came west

In the East, he had been active in the Nation's first organization of motion picture cameramen, the Cinema Camera Club; when he came to Hollywood, he took an active part in an affiliated Western organization, first known as the Static Club, and later as the Cinema Camera Club of California And when, in 1919 this organization was reorganized to form the American Society of Cinematographers, Arthur Edeson was one of the Charter Members of the A S C He has served actively and continuously on the Society's Board of Governors, and has held almost every office

in the Society with the exception of the presidency, which he has repeatedly declined

In the early '20's, Edeson joined Douglas Fairbanks, Sr's producing organization, which was probably the foremost producing unit in the country "Working with Doug," he says, "was one of the great experiences of my life Doug Fairbanks was an inspiration to everyone who worked with him We often hear about producers, directors and actors in our business who say they are working toward 'bigger, better things,' but all too often it is only disappointing publicity, with no foundation in fact.

"But Doug was really striving to advance motion pictures as an art He was constantly seeking new and more expressive ways to do things, and he actively welcomed in his organization people who were trying to make similar progress in their own fields

"Doug had a keen appreciation of the real significance of photography I don't mean by that that he insisted blindly on 'pretty' photography, regardless of whether or not it fitted the picture He knew, just as well as any cameraman, that purely pictorial camerawork can sometimes hurt one story just as much as it can help another.

"As an example of this, I remember how we made 'Robin Hood' Doug, you know, had a unique way of working He never worked from a script in the formal sense of the word He would mull things around in his mind for weeks or months until he had the basic story concept worked out mentally to his satisfaction. Then he'd start shooting, working closely with director and cameraman and getting what he wanted, but seldom with anything written down in script form

"For 'Robin Hood,' the 'script' consisted of half-a-dozen lines scrawled on the back of a piece of paper—just rough and almost undecipherable notes as to 'characters—conflict—intrigue' etc. The rest was locked in Doug's brilliant mind

"As we began to get really into the picture, I found myself in a quandry We had some of the most spectacular sets ever built in Hollywood, and with the costumes, the pageantry, and all, I knew the picture offered some of the most spectacular photographic opportunities any cameraman ever had But I didn't know enough about the story to know whether or not I ought to take advantage of them

"Finally I went to Doug and asked him 'Doug,' I told him, 'this is a cameraman's picture if there ever was one But tell me—if I sock it with everything I've got, will your story stand it? I don't want my photography to overpower the story'

"Doug told me to go ahead, and I did. And I think the outcome proved he was right, for 'Robin Hood' is still remembered as perhaps Doug's strongest picture But I'm sure if he had had a weaker story and weaker characterizations, spectacular camerawork could have submerged them so completely that the picture would have been one of those things everybody would dismiss as being visually beautiful, but without any real punch as a picture

"It's the same today I think one of the most important parts of the cameraman's job is determining when to let himself go in photographing a picture, and when to hold himself in If the story or characterizations are weak, he's got to restrain himself or he'll weaken the picture. But if the story is strong, he can let himself go photographically and be sure he'll help the picture.

"And, granting equal story strength, a variety of different visual treatments are possible A picture like, say, 'Citizen Kane' or 'The Maltese Falcon' will call for strongly modernistic, eye-arresting camerawork A picture like, say, 'The Great Waltz,' or 'The Chocolate Soldier,' would be ruined by that treatment—they demand a highly pictorial, romanticized touch And there are always some pictures—you'll find them in a majority of the 'B's—where the camera should be just as inconspicuous as possible, to heighten the illusion of realism, and maybe to keep from overpowering a weak story

"The best thing, I think, is to strive to keep things always as simple as possible, photographically speaking The principal things are always your story and actors— if you keep your compositions and lightings simple, placing the accent rather on them than on the camera, or on mere decorativeness, you can't go very far wrong." END

Railroadin'

(Continued from Page 481)

train to pass. He had the driver stop, we jumped out of the car, Boland carrying the tripod and I the camera, and raced for a wire fence between the highway and the tracks.

He found a hole used by dogs to crawl under, so we emulated canines, slid under the fence and dashed across the tracks, set up the camera, composed the scene with the steeple in the center background, and started the camera The scene showed that we beat the train by about four feet of film before it rolled into the picture. Imagine doing shots like these in 35mm Technicolor — or black-and-white, for that matter!

To cool off, we finished the day by shooting the icing of refrigerator cars

At St. Louis we captured some remarkable shots of huge grain-elevators and their operation in connection with railroads Boland had me compose one long-shot of a huge group of grain storage-elevators in which he planted some wild wheat for a cluster to break the foreground Nice clouds framed the structures, too. Jack made us a deal after this sequence He said that if we didn't mind covering the arrival of the "Rebel," one of the mid-continent's most famous trains, during the lunch hour instead of eating lunch, he would take us to see the Cardinals play Pittsburg Well—we saw the game and ate hot dogs for lunch . . . we weren't suckers!

Finally, back to Los Angeles where our toughest shots were yet to be filmed. The Union Pacific loaned us their streamliner "City of Los Angeles" to use between arrival in the morning and departure that night as a setting for our modern train interior sequences. This presented a difficult lighting problem We were compelled to shoot on the train because authenticity was the paramount object of this picture No process shots were allowed!

We had to install a "Jennie" in the baggage-car and run cables the length of the train From the baggage-car to the observation-car required 3500 feet of four-ought cable. And that caused enough drop in the power load to affect color considerably. However, a swell crew and good filtering brought us within a pretty natural color range even on that observation-car shot Scenes in the diner, lounge-car, Pullman and chair-cars were less difficult, although they offered their own peculiar problems too We had five hours to get all our scenes and off the train that day—and we made it, in spite of all the varied temperaments of actors, grips, juicers, railroad men, etc

Among the rocks at Iverson's ranch we staged a cattle-rustling scene, a dust-storm, a hurricane, primitive home construction, farming, and other pioneering scenes At the old Inglewood station we re-enacted early railroading sequences

For one sequence in the pioneering portion of our film, the script called for shots of longhorn cattle. The only place in America where longhorns are yet to be found, we learned, is the government game reserve near Cache, Oklahoma, so Boland and I caught the sleeper plane for Oklahoma City, drove to the game reserve in the morning and by noon the rangers had rounded up a huge herd for us to film

From noon until about four in the afternoon we spent shooting that herd of longhorns from every conceivable angle; close ups, medium-shots, long shots, high shots, low shots Nearly every scene required the herd to pass close by the camera, either coming toward it or going away. That day Boland reached a directorial pinnacle even a De Mille might envy He discovered he could make longhorns go any direction *they* wanted to go!

After we finished, we drove to a nearby refreshment center where we consumed at least half a dozen "cokes" each While imbibing so delicately the superintendant of the reserve casually mentioned that this was the first time in a long while that the herd hadn't attacked persons on foot . . . and Boland and I had been on our feet next to the camera all that afternoon!

To sum up, we covered more than 50,000 miles in just under 60 days, via airplanes, taxis, and the seat of our trousers, to film "Railroadin'" in color, under *actual authentic conditions*, thanks to Kodachrome and efficient 16mm. cameras and crew END

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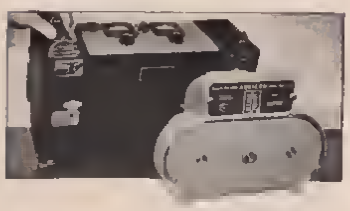

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Sunshade

(Continued from Page 485)

CINEMATOGRAPHER, as a means of perhaps returning to that magazine and its readers a little of the help many of its articles have in the past given me. However, I hope that if either now or in the future some enterprising manufacturer manages to get around the problem of priorities sufficiently to be able to put a somewhat more finished version of this sunshade on the commercial market, he will extend me the courtesy of sending me a sample so that my little idea, grown up and dressed up, may perhaps some day come home to roost on my camera! END

Off the Beaten Path

(Continued from Page 487)

positions and action so that the main points of interest are so located that in spite of the difficulties the net result is one of consistently correct exposure."

In spite of the midsummer weather the abundant snow in the higher reaches shared with the great clouds the many honors bestowed by the photographer. To secure full returns from the snow Mr. Parker developed into a patient waiter for the appearance of the clouds. And the patience was awarded.

The snow and the clouds made a splendid backing for many of the shots of waters that were exposed. There were great tumbling falls and racing but smoothly gliding streams sparkling in the sunlight.

The scenery shots were lightened and heightened by "bits" of fellow-packers, of stopovers for luncheon or at the trail's end for the day. In one of the sequences there was a group of four girls in one party, in one good-looking party, it may be added, the appearance of which on the screen added to the interest.

There was a close-up of the rare golden mantle squirrel feeding out of a child's hands. There was another shot of a plenty-horned buck eating candy being fed to him by a little boy and girl. The photographer knew should either of the children withhold the candy in an attempt to tease the big animal they would be in grave danger of being gored by the buck; they were accordingly warned.

Many of the shots were with telephoto lens. One that caused amusement among the women guests on the evening of the showing was described as around a school-teacher, disporting her ample self arrayed in Coney Island garb—at 9200 feet altitude. She was unconcerned, nevertheless; but she saw not the revealing camera which recorded the mountainous overexposure.

Technically the pictures rate. Exposure was uniformly excellent—all the more so when it is considered the photographer was thrown entirely on his own through the conniving, bouncing mule. So also was excellent the depth of focus, extreme clarity standing out in distance shots.

Good judgment was displayed in cutting, in pacing the sequences of human

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interest with vistas of piling mountains and spreading valleys, of all the spots that could be found by a veteran Yosemitean on a patient hunt for something new. And how well he succeeded! END

Planning a Script

(Continued from Page 484)

trousers, the other stands at his shoulder. They try to arrest his attention.

Scene 12. Close-up of the Sunday paper. It comes down and Father's face appears, with a scowl.

Scene 13. Medium-shot (as in Scene 11). The children jump up and down in excitement.

Scene 14. Two-shot of the children. They say, "Can we go on a picnic, daddy?"

Scene 15. Close-up of father. He shakes his head.

Scene 16. Two-shot of the children. Very sad. They ask 'why?"

Scene 17. Medium-shot, father and children. He looks from one to the other and then motions to them to follow him. They exit.

Scene 18. Medium-shot, mother. She smiles, puts down her sewing and exits.

Scene 19. Medium long-shot, corner of house. Around it come father, mother and children. Father is still arguing, children pleading, mother smiling. They walk past camera.

Scene 20. Medium-shot, car in driveway. Family around it.

Scene 21. Medium close-up. Father takes yardstick, takes cap off gas-tank, thrusts in stick.

Scene 22. Two-shot of children. Very concerned with the proceedings.

Scene 23. Medium close-up of the yardstick, showing very little gas in the car, and father's face, showing great satisfaction.

Scene 24. Medium shot (as in Scene 20). Father leans back on bumper, satisfied that he has proved his point. Children dejected.

Scene 25. Medium close-up. Mother says, "Let's walk."

Scene 26. Medium-shot. Children jump up and down excitedly again. Father stands up and stares at mother.

Scene 27. Close-up, father. With a horrified expression he asks, "Walk?"

Scene 28. Medium long-shot, corner of a house. Family exits around corner. Children very animated. Father dragging himself along in the rear. Fade out.

Scene 29. Fade in. Medium long-shot, corner of house (same as Scene 28). Family enters, dressed for picnic, and walks through scene.

Scene 30. Long-shot, the street outside the house, the family disappearing in the distance. Fade out.

As a finale for the picture the family can be shown coming home as in Scene 30. In this instance they walk into the camera.

Scene 31. Long-shot (as in Scene 30). Family walks toward camera, tired but happy. Father brings up the rear, loaded down with baskets, books, toys, etc.

Scene 32. Close up, foot-bath full of steaming water in which four pair of feet are resting. An appropriate scene over which to superimpose "the end"

The above prelude to the picnic, broken up into thirty scenes or set-ups, sounds like a lot of work. Actually it is a lot easier than unplanned shooting, and it saves film by making every foot count. In shooting it, take all the long-shots in a sequence first, then the medium long-shots, then the medium-shots, and so on till you have moved in to the close-ups.

This is simple if a list, similar to the one above, is made of the contemplated action, and then is regrouped according to the shooting schedule. For instance, Scenes 3, 5, and 11 can be shot from the same camera position. So can 8, 10 and 18, moving in just a little from that spot for Scene 6. In the same way, Scenes 19, 28 and 29 can be made from the same, or nearly the same camera position, and Scenes 30 and 31 can be made at the same time, from the same camera set-up.

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plan, it's easy to get continuity into your pictures. And in the process, you'll find script-writing loses all its supposed terrors. Try it! END

Editing Case

(Continued from Page 483)

way, you can just run your electric cord from the light socket on the back-wall to the plug-in on the side wall, and from there continue the same line out to be plugged into the handiest outlet in the room. If you want to have a more finished job, wire your electric line to a countersunk male connection on the outside of the box, and then have a separate feed line which you plug into the same way you plug in a projector cable.

You can leave the inside of the box in its natural state, or paint it white; the latter is probably preferable from a practical standpoint, and it certainly looks better. You can paint numbers inside each of the 120 little pigeon-holes in the film-storage compartment, or you can simply identify each scene by putting a small piece of paper back of the film, with a pencilled notation as to what that scene is.

In editing a film for continuity, I start at the bottom of the film-storage compartment, working from right to left. The first hole contains the leader, the second, the main title, and so on. Each piece of film is noted on a sheet of paper, and placed in the proper pigeon hole, corresponding to the order in which the scene will appear in the finished film.

It is a very simple matter then to start splicing the film together in proper order, taking each scene from its pigeon-hole as you need it. And the first thing you know, your disconnected scenes have been assembled into a complete movie story. Unless you're making an unusually long super-picture, there will usually be plenty of pigeon-holes left over for storing odd pieces of film, too.

Editing film this way is easy, and if someone comes to call when you're right in the middle of the job, just close the lid to the film-storage compartment, close the box, and your whole editing job is arranged just the way you left it. You can put the box away in the closet, confident that you won't lose or disarrange the film, and that everything is safe and dust-proof. Then when you have some more time to work on your editing, you can take the box anywhere—den, living-room, office or anywhere else—and go right ahead with the work just as though there hadn't been any interruption. And the film will be just as ready and just as safe, whether it's tomorrow night, or a month from tomorrow! END

"Strobo-Sync"

(Continued from Page 482)

with a stop-watch and checking for any difference in speed. This should be done with both recorders cutting a test disc at the same point from the disc's center and at the same time. Any speed difference should be corrected before attempting to record or play back your discs.

If only one recording unit is available, and in most cases this will be true, the production will have to be broken down into units; the length of each unit being governed by the length of playing time of each recording. In making the first disc the recorder and the projector should be carefully synchronized by means of a check rehearsal using the reflected light from the screen or the leaked light from the projection beam directed upon the strobe disc to bring the projector up to 16⅔ frames per second.

Then, after the correct strobe band matching the number of blades of the shutter has been selected, and "stopped" by the projector's flicker, the projector thoroughly warmed up and reloaded, and the ending frame of the first recording unit marked and timed, everything is ready for the first take. (Incidentally it is wise to select and mark a frame several frames preceding the first title or picture and use this as a "sync" mark—starting the film here for recording and each playback.)

At the signal from the recordist, both the music and the projector should be started at the same time. Immediately the strobe should be checked for synchronization and any minor adjustment in projector speed that might be necessary made. Then throughout the entire recording the strobe should be checked to hold synchronization constant.

If dual recorders are used, each changeover point should be noted on the film and if possible should be at the end of a scene for convenience in later playback syncing.

However, in using one recorder it will be necessary to stop the projector at the end of each disc, mark the ending frame

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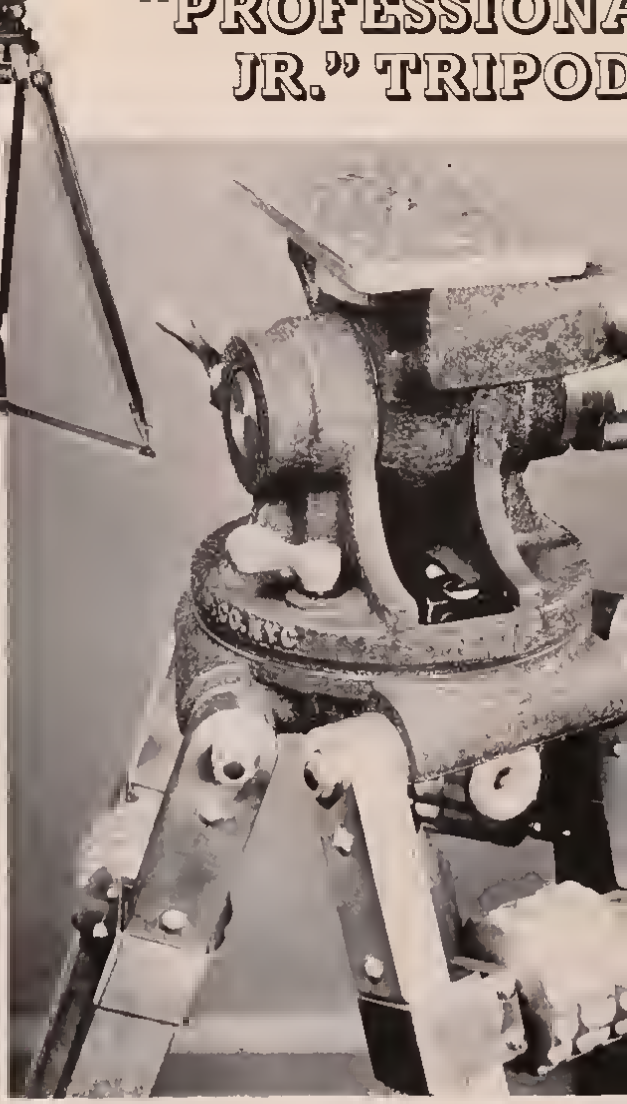

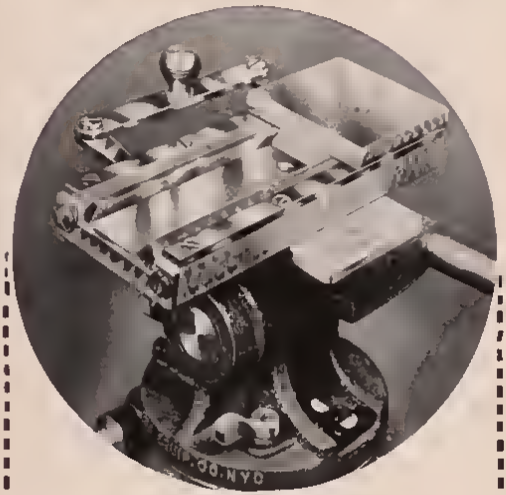

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with a single hole punched through it, and back up the film several feet so that the projector will be up to speed and in sync when the next take begins. This punch-mark should be large enough so that it can be readily seen by the projectionist and others concerned with the recording as it will serve as a cue to start the succeeding take and will serve as a change-over mark in later playbacks.

The recording of the second and succeeding units should be started the same as the first unit with the exception that the music or commentary takes its cue to start from the punch-mark on the screen, as the projector will be running first. In other words, the recorder will start, and as soon as the cutting is checked, the projector will start, and syncing must be established before the punch or change over mark shows on the screen for when this mark shows, the sounding will commence for this unit.

Following the making of the record ings, a heavy mark should be made at the beginning of each record where the cutting stylus started to cut. This should be quite heavy so that the reproducing needle can be set in it easily in the dark during showings. A smart idea is to paint with luminous paint (which can be bought in any 5 and 10c store) a small "U" around the groove's beginning. The needle can be set in this in the dark and thus accurately engage the groove's beginning.

Count with a stop-watch the number of seconds needed for the recording to run from this point to the first note of music. Then, by multiplying this by 16-⅔ frames per second, (The speed of the projector when in perfect sync), the number of frames preceding the change-over mark to start the record can be learned. For instance, if it takes six seconds to run off the lead grooves of the disc, this multiplied by 16⅔ would set the start mark of that disc exactly one hundred frames before the change-over mark.

Here two small punch-marks should be made in the film so as to signal the projectionist to start the next record for the take or unit following. By the time the change-over mark shows up, the disc just released will be in sync with the film, and when the switch from one disc to the next is done there will be no break in either the commentary or music, and synchronization will be maintained throughout.

To prevent any possible miss of the start mark, a third mark might be put on the film, say five seconds preceding the start-mark, and thus a projectionist unfamiliar with film would not be caught unprepared and thus lose synchronization when the change-over mark shows up.

For persons with only one playback table, the above procedure can be followed out with only slight modifications. Time yourself to see how long it will take you to change records in the dark and find the opening groove of the next record. Allow this time to elapse at the end of each unit during recording and then stop the film. Make a *temporary* mark on the film and then let the projector run for an additional *six* seconds before stopping the projector, a second time.

Better yet, count off 100 frames *in advance* from the temporary mark and make your change-over mark here. Now back up your film to the temporary mark and start both the recorder and the projector at the same time. When the change-over mark flashes on the screen, start your sound for the second unit.

After this unit has been finished (and this should also be done for each succeeding unit), count the number of seconds needed for the *playback* turntable to run in from the beginning of the opening groove to the first note of sound, and multiply this by 16⅔. The result should be about one hundred frames or back to the temporary start mark.

However differences in pickup speed of the recorder and playback tables may alter this, so the final start mark should be made to correspond with the length of time needed to "run in" the recording on the playback turntable.

This will allow a silent period during the showing of the finished production equal to the length of time needed to change records *plus* the time needed to "run in" the new record to its sound, but will not necessitate stopping the show or interrupting it in any other way.

During all of the above, and especially at the change-over periods, the strobe discs should be very carefully watched, as syncing may be affected by power fluctuations due to the starting and stopping of turntables which in turn may change the speed of lighter projectors. Carefully followed, syncing of 78-rpm discs may be worked out close enough to permit lip-motion synchronization. However, this should not be tried until the operator and all concerned are thoroughly familiar with the routine.

The method outlined above will enable persons with ordinary phonograph equipment to add sound to their films with a minimum of initial expense and a maximum of quality and satisfaction. Of course it will be realized that the success of any such procedure hinges directly upon the care taken and the

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thoughtful applied to the production before it is actually recorded, as well as during the recording and final playbacks END

Post-Recording

(Continued from Page 477)

acoustically perfect room, with the voices ideally close to the microphone In addition, this method also makes possible the substitution of voices, so that one actor—or an actual workman—can be used for the picture, and a different actor for the voice in instances where it is not possible to find a single person who is completely suitable for both

This aspect, I believe, will be of increasing importance in making today's industrial training films and propaganda or morale films with dialog scenes laid in armament factories, shipyards, and similar plants In many of these plants, the general noise level is so high that really satisfactory dialog recording could not be obtained by any other method Moreover, while it is not too difficult to select a real workman who looks appropriately the part for such scenes, it would usually be to much to expect the average real workman to be able to read lines as effectively as may be necessary to convey the instructive or emotional message of the scene

In such instances, this type of voice doubling will prove invaluable, even in addition to the advantage it offers of simplifying the problem of equipment, and making it possible to film dialog scenes in the field rather than on a studio set END

Battle for Moscow

(Continued from Page 471)

Groups of men are scattered all over the battlefield Shouting, "Hurrah! For our country, for Stalin!" men rise from the trenches and dash forward.

One minute ago these men were pressed close to the walls of the trenches, shrinking at the loud whining of shells Now in a burst of enthusiasm they are rushing forward against the enemy, paying no attention to exploding mines all around One commander shouts something, brandishing his revolver Then he falls, apparently wounded in one leg, rises on the other and continues to shout, urging his men on. We, too, swept by the general enthusiasm rise from the trenches and begin filming the engagement

That day the enemy in our sector wavered and began to fall back . . .

Shock troops of Major General Zakhvatiev were engaged in a battle for the village of Spasomazkino We left our car in a deep ravine about a mile and a half from the village The road toward the village was kept under strong fire Very often we had to crawl and snow got into our felt boots, sheepskin coat sleeves and camera The camera's mechanism was affected by frost and for each filming it was necessary, while lying in the snow, to warm it beneath the sheepskin. A battle was being fought on the outskirts of the village Our men were vigorously dislodging German automatic riflemen from all shelters.

Near the school we beheld a terrible picture which we will never forget: Thrown together in a heap lay the dead bodies of old men, women and children. Some had legs and arms broken, others disfigured faces All had been shot with automatic rifles Somewhat aside lay embraced an old peasant and a young woman with an infant in her arms Why had those people been shot? The infant had apparently been wrapped in a kerchief or blanket This the Germans had torn off, and the woman had pressed the naked body of her infant daughter to her own Bullets had pierced the child's shoulder and breast, the blood was congealed in scarlet strips

Our men, their automatic rifles still steaming, stopped near the dead and then silently, with lips compressed, proceeded to the place from which came the noise of rifle shots and reports of exploding hand grenades Soon German resistance was broken and our troops, advancing in a long column, entered the village

Below I see black dots in motion. There are German soldiers scurrying in all directions

I scarcely manage to turn aside somewhat before the gunner opens machine gun fire upon the dispersing enemy infantry and machines Then discerning something in a side window, he goes up toward a machine-gun and opens fire "A fascist plane," I say to myself Two of our pursuit planes pass above us, heading straight for the enemy As if racing they keep overtaking each other. I prepare the camera for filming

A bright sun shines straight into the cockpit It has dispelled the mist and several rays are in the gunner's smiling face The plane flies smoothly, confi

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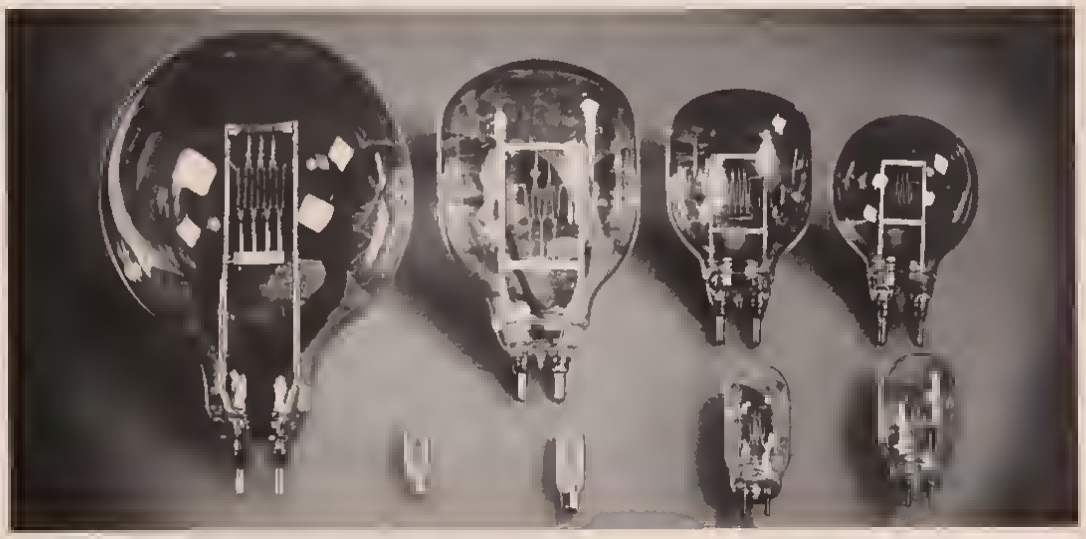

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dently We pass over enemy positions Below we see several explosions of anti-aircraft shells The Germans apparently collected their wits and decided to ambush us on the way back

For three days after that we filmed the life of fighting fliers .

Heavy snow Mist This could hardly be called flying weather But the planes prepared for flying bombs were put in place, machine-guns loaded Pursuit planes were to accompany the bombers We motion picture cameramen flew in two separate planes

Each of us took up a position in the rear of the cockpit of the dive bombers alongside the gunner and wireless operator Each motion and turn were figured out beforehand so that we could do our work and not be in the way of the gunner Over us flew pursuit planes guarding the heavier machines

Two enemy planes, Junkers 88's, appear in front of us They avoid an engagement I descend to the lower hatch where I squeeze alongside the machine gun The pose is rather unusual feet resting on the seat above and head below, pressing against the machine-gun Eyes water, there is a rush of blood to the head.

A long ribbon road cuts the snowy waste There are black dots on the road—tanks and lorries Somewhat farther away we discern a river crossing

Bombs are released from the plane Many bombs. They drop with a rush and in a few seconds flashes of explosions appear along tank and infantry columns One bomb hit a crossing. Soon fires burst out. The fascist lorries and tanks are burning. I grip the camera and film in a sort of frenzy, overcome with the hatred I feel for the enemies of my country

Our plane climbs a bit, makes a turn and then dives. A noiseless drop along the incline, accompanied by the howling of a wind which within a fraction of a second swells into a roar I can hardly catch my breath and my eyes smart An invisible force pins me to the board and seems to be breaking my body Then the plane straightens out

The beautiful church of Volokolamsk monastery was sacked by the Germans. After their retreat, smashed icons, torn paintings and Books of the Gospel were found scattered on the floor

The local Ethnographic Museum fared even worse. Not a single exhibit was left undamaged The Germans even tore the skin off a stuffed bear The huge bear lay prone on the floor with paws outstretched. The skin was gone—only the grey canvas remained, with holes where the felt stuffing stuck out The director of the museum had witnessed how the Germans had divided among themselves the skin removed from the bear One carved out a pair of boots, another took enough for mittens, still another was going to have a cap made. The poor bear was left naked. . . . END.

New G-E Representative

Above is Henry J. Chanon, new Los Angeles lighting engineer for General Electric Widely known as an industrial lighting engineer and a specialist in blackout and "black light" problems, Chanon succeeds W H Robinson, Jr., called East to head General Electric's new electronics branch, and Alston Rodgers, now on duty with the U S Navy

STATEMENT OF THE OWNERSHIP MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24 1912 AND MARCH 3 1933.

Of 'th American Cinematographer published monthly at Los Angeles California for October (s) 1942

State of California } ss
County of Los Angeles }

Before me a Notary Public in and for the State and county aforesaid personally appeared William Stull who having been duly sworn according to law deposes and says that he is the Editor of the AMERICAN CINEMATOGRAPHER and that the following is to the best of his knowledge and belief a true statement of the ownership management (and if a daily paper the circulation) etc of the aforesaid publication for the date shown in the above caption required by the Act of August 24 1912 as amended by the Act of March 3 1933 embodied in section 537 Postal Laws and Regulations printed on the reverse of this form to wit

1 That the names and addresses of the publisher editor managing editor and business managers are Publisher A S C Agency Inc 1782 No Orange Drive Hollywood Calif . Editor William Stull 1 S. No Orange Drive Hollywood Calif Managing Editor William Stull 1782 No Orange Drive Hollywood Calif Business Manager Marguerite Duerr 1782 No Orange Drive Hollywood, Calif

2 That the owner is (If owned by a corporation its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock If not owned by a corporation the names and addresses of the individual owners must be given If owned by a firm company or other unincorporated concern its name and address as well as those of each individual member must be given A S C Agency Inc 1782 No Orange Drive, Hollywood Calif a non-profit corporation wholly owned by the American Society of Cinematographers Inc 1 S N Orange Dr Hollywood Calif Officers of the American Society of Cinematographers Inc are President Fred W Jackman 1782 N Orange Dr Hollywood Calif First Vice President Arthur Miller 1782 No Orange Dr Hollywood Calif Second Vice-President Leonard Smith 1782 N Orange Drive Hollywood Calif Third Vice-President Karl Struss 1782 N Orange Drive Hollywood Calif Secretary-Treasurer Lyton Haskin 1782 N Orange Drive Hollywood Calif

3 That the known bondholders mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds mortgages or other securities are (If there are none so state) None

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That the average (number of copies of each issue of this publication sold or distributed through the mails or otherwise to paid subscribers during the twelve months preceding the date shown above is) (This information is required from daily publications only)

(Signed) WILLIAM STULL
Editor

Sworn to and subscribed before me this 29th day of September 1942.

(Seal)
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Notary Public in and for the County of Los Angeles State of California

(My commission expires July 1 1946)

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Lots love,
John
V-MAIL
A
B
C

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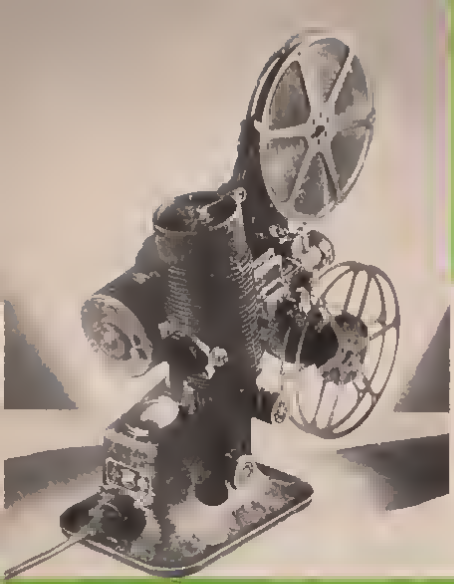

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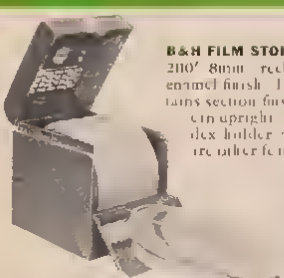

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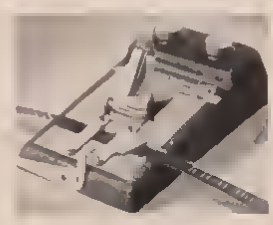

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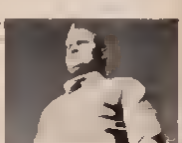

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